THE Blue Jay

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The groundflame of the crocus breaks the mould" Photo by Fred Bard

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BLUE JAY CHATTER

Who has seen a coyote recently? This question comes to mind each time one sees an item in the daily press or in a farm magazine about the increase in mice—the coyote's favourite food—with thousands of acres of unthreshed grain in our fields. Two Canadian Press items that I read in the **Leader-Post** actually raised the question of the relation between the growing numbers of mice and our programme of coyote control ("Coyotes raise dilemma," Dec. 12, 1959; "Mice eat into grain in swaths," Jan. 9, 1960).

There has been an upsurge in the mouse population in many places; for example, the outbreak of mice in the Clouston area near Prince Albert, reported by the Searle Grain Company. We agree with D. A. Gilliland of the Wheat Pool that mice are bound to increase when grain is left in the fields but we do not agree with him when he says, "as far as we know, there is nothing that can be done to remedy the situation."

I believe that in Saskatchewan something **is** being done to ensure that there will not be too much crop damage from mice when exceptional weather conditions prevent the harvesting of the grain crop. In this province there is a growing appreciation of the value of hawks and owls. I'm sure that members of the Saskatchewan Natural History Society have been partly responsible for the change in attitude. It is interesting, for instance, to read in this issue of the **Blue Jay,** Mr. Law's first-hand account of how the Great Gray Owl catches mice. A more tolerant attitude and an appreciation of the role that hawks and owls play in controlling such population outbreaks as the present increase in mice will lead, we hope, to the enacting of legislation giving complete protection to all hawks and owls. A pertinent little item in this issue (p. 16) tells of the role played by the Great Horned Owl in keeping the Magpie population in check.

The Saskatchewan Fish and Game League has done much to create a better understanding of the value of predators. At their annual meeting in 1959 they discussed resolutions seeking protection for coyotes and weasels as well as hawks and owls. There are of course times when an individual predator will cause trouble and loss to the stock- or poultryman, but generally speaking such loss is almost insignificant in comparison to the good which predators do. We are coming more and more to recognize the function of predators in maintaining a healthy wildlife community, both by cropping weak animals and by cropping surpluses. In certain localities, for example, deer have recently increased, partly because of lack of natural predators, to the point where they are actually doing damage to crops and the season has to be extended to control them.

The recognition that hawks and owls are beginning to get in this regard will, I believe, eventually extend to predators like the coyote. Even farmers who pressed for a rigorous coyote control programme are now asking whether this action was altogether wise. Certainly control has been so effective that the coyote population is now very low. Time was when you could go out and hear the coyotes almost any evening, and when you frequently saw them going about their business in the fields. If you were lucky, you sometimes saw a coyote intently creeping forward with ears up, making a quick jump, landing with all four feet close together, and then the nose going down between the paws to bring up a mouse. During 1959 I saw only one coyote and I miss them. Farmers, believe me, this animal is your friend —do not allow anyone to kill all the coyotes in your district. We should learn from the experience of others—in the state of Colorado the coyote is now fully protected by law.

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Rambles Along the Long Creek

By **Hugh McLaughlin,** Lewvan

The Estevan area has been much publicized for its mineral resources but I had an opportunity to see quite a different aspect of it when I lived beside the dam site on Long Creek for a year, and took long rambles along the valley downstream from the dam.

Upstream from the dam site the valley was stripped bare of trees to prevent trash accumulating in the bottom of the newly-formed lake. In the last year or so, native shrubbery has grown up, including more than a dozen species—chokecherry, saskatoon, buffalo berry, etc.—and I have often thought that it would be nice to transfer some of it to other new dam sites such as the one at the Weyburn Hospital. It was satisfying to see the snow melt the first spring and a lake of some proportions form in the valley, to hear the buzz of motor boats and see the spray of water skiis, to enjoy frequent swims in the new lake, or to think of this water serving the power plant, and the fish and wildlife of the area. Still, it was the quiet valley below that I enjoyed the most.

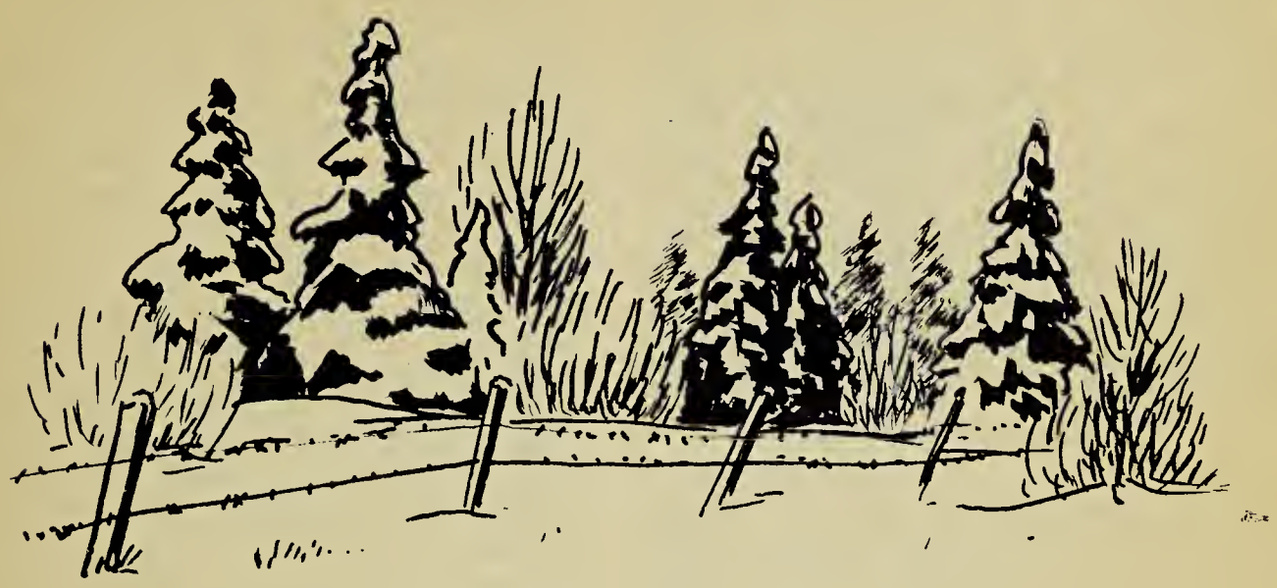
It is an adventure to travel down a small stream in a canoe, with the next bend always beckoning on. The feeling is so different from the feeling one gets walking along the banks. I have travelled northern lakes and streams in a canoe, but they held no greater charm than going down Long Creek. Yes, the shores were lined with alder, birch and poplar along the Manigotagan in Manitoba, while the shadow of spruce fell on the water and great flats were covered with wild rice. But here huge elm, ash, and maple hang over the stream, and a great variety of shrubbery lines the valley. Fresh chips on the shore testify to the presence of beaver, then a beaver slide, and finally a beaver that lets you get quite close before slapping the water with its tail and diving. On the shore you see a deer and a fawn that you surprised by this unorthodox approach.

From the first crocus on the flats in spring, through the cactus and prairie lilies of July to the aster and sage brush in the fall, the seasons parade by. There are so many plants that I do not know in this area that I found it a bit frustrating rambling among them. Brick-red tops of hills were covered with evergreen creeping juniper. On the bare, eroded sides of some of the hills, in the dryness and the heat, another plant grew with twisted, tortured stems. With its sparse leaves, it did not catch one's eye until late fall when it really blossomed forth with yellow flowers not unlike the golden rod. I later learned that this plant is known by the rather prosaic name of rabbit brush.

Of all the memorable evenings spent looking and listening, one stands out above all. It was in September and the leaves were at their golden best. The red of saskatoon and chokecherry on the dry hillsides gave way to the reluctant yellow of elms and the rank greenness of grass near the water's edge. A beaver was calmly peeling the bark from a willow twig not thirty feet away. After I had watched the beaver for some minutes, a snorting sound caused me to look up across a small field. The noise was caused by a pair of deer which jumped in and out of the trees fringing the creek almost like showoffs who had succeeded in attracting my attention. Then the evening colour of the skies began to fade. Three young fox hunted over the field, noses close to the ground, intent on mice and not on men. A skunk waddled over the cultivator ridges and a great horned owl swung out of the trees on silent wings. One heard the voices of birds of the evening. It was like a scene from a Walt Disney true-life movie—all within two or three miles of Estevan. May men use with wise stewardship the tangible resources of coal, oil and brick, but may they also preserve the intangible. May they learn to enjoy intimately the beauty of bird, flower and field, that succoured me during my stay by the valley.

Nature Notes from Spruce Dale Farm

By **C. Stuart Francis,** Torch River



Here are a few unusual notes of fur and feather which have come to my attention during this past year.

Last winter my son, Stanley, was working along the Flin Flon Highway northeast of White Fox cruising timber, and one day while he was waiting for a truck to pick him up along the highway, a Gray Jay or "Whiskey Jack," as they are known here in the north, visited him while he was eating his lunch. Stanley noticed that the jay had a porcupine's quill sticking right through its neck. Possibly the quill got stuck there while the jay was feeding on a dead porky somewhere, but it did not seem to bother it any.

We are building a new house at Spruce Dale Farm and one day late this fall when we were all busy with hammer and saw, making lots of noise, who should show up but a Great Gray Owl. He sat on a twenty-five foot spruce not more than 100 feet from us for several hours, and all the noise did not seem to bother him in the least. Great Gray Owls seem to be showing up more each year now .

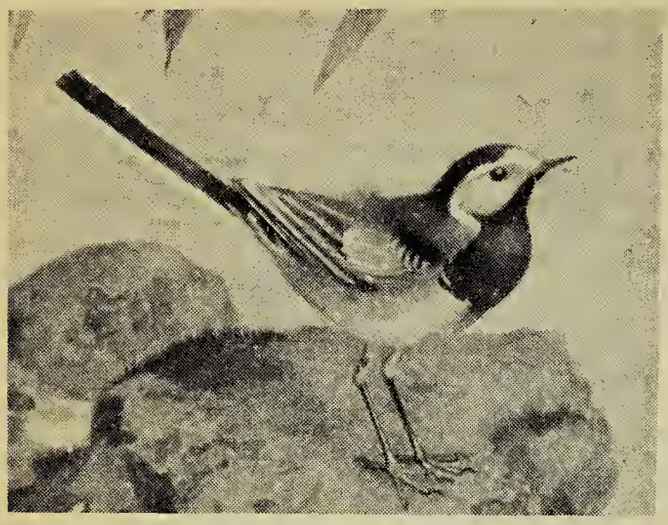
Last July when we were travelling by outboard motorboat the full length of Little Bear Lake, which is about 11½ miles across at the widest point with several "narrows" sometimes 150 yards or less, we were passing through one of these narrows with a light breeze making some fair waves of possibly six inches high, when I spied a Red Squirrel swimming lustily in front of the boat. He was crossing to the opposite side of the lake and he surely looked pretty small with only his head and bushy tail appearing out of the water. Possibly he had made the trip before.

I have lately received a report that a Gray Squirrel was shot 16-18 miles northeast of Nipawin. The Gray Squirrel (*Sciurus carolinensis*) is regarded as a southern species, but apparently quite a number of animals from south of the border are beginning to make their appearance in Saskatchewan. A record of the Gray squirrel at Rose Valley is the nearest record to us given by Harvey Beck in his **Guide to Saskatchewan Mammals** (1958). This squirrel is considered to be one of the most graceful and handsome of the whole squirrel family.

Let's keep our eyes and ears open this year, and who knows what unusual happenings in nature we shall uncover.

Letter from England

By **Timothy Dixon**, Wells, Somerset



Pied Wagtail

EDITOR'S NOTE: We enjoyed receiving this letter from England from Tim Dixon, the ardent English "birder" whom we met last June and invited to go with us to the SNHS meeting at Moose Mountain. Everyone who met Tim Dixon at the summer meet will agree that getting to know new and enthusiastic birders from other places is one of the real attractions of our summer get-together.

All our summer birds have gone but our winter birds have not arrived down here yet, except for a small flock of about 30 White-fronted Geese which I saw on the River Severn near the Wildfowl Trust. That was last Saturday (October 17, 1959) when I visited the Trust with friends. As you probably know, it claims to be the largest collection of wildfowl in the world and it certainly is a wonderful place with most extensive grounds, many pools, pens, gazebos, etc., and innumerable birds. North America is quite well represented and I saw many of my favourite Canadian species with Wood Ducks especially plentiful.

Just around Wells, there is not too much surface water, so few water birds, but there are hills, valleys, and plenty of woods. In these woods are many of our typical species—Green Woodpeckers, Great Spotted Woodpeckers, and Nuthatches in goodly numbers, with Marsh Tits, Long-tailed Tits, Coal Tits, and Tree Creepers all pretty common. Of predators, Buzzard, Sparrow Hawk, and Kestrel are all common but all other species are very rare. A family you do not have is the wagtail group, and here there are many Pied Wagtails. They like lawns and moist areas and can often be seen hunting for insects around the Moat. Sometimes there are five or six and they roost communally. I know of a roost of 40 odd in ivy on an old Unitarian chapel in my home town of Macclesfield. The Grey Wagtail—which many claim to be the most elegant bird on the British list—is also seen around the Moat. It is more solitary—it is quite rare to see more than two together—and is seldom seen except near still or running water.

Another lovely bird seen around the Moat is the Kingfisher—quite a different sort of bird from the big Belted Kingfisher so familiar in Canada. Ours is no larger than a thrush, with arrow-straight flight and sharp call. No doubt one or two would nest locally.

Today I chanced to walk around the Moat and found that it had been temporarily drained so that only a small brook flowed down the middle of it. Here two Mute Swans were feeding and a Little Grebe was diving. Once the Little Grebe dived and reappeared just as some vegetable matter drifted downstream, with the result that it acquired a crown and necklace of the floating weeds and leaves.

Local owls are the Tawny and the Little. Lord Lilford introduced the Little Owl from the Continent many years ago, and since then it has spread throughout England and Wales and is common in many places. It has a shrill cry which it utters at dusk and is on the whole rather noisy. It would be about the size of a Screech Owl.

We had quite a good wader migration in Poole Harbour, many Redshank and Greenshank, a Spotted Redshank, 400+ Curlews, a Whimbrel, hundreds of Oystercatchers, Dunlin, and Turnstones, and a Black-tailed Godwit, many Bar-tailed Godwits, and so on. On heaths nearby, I was very pleased to find again the very rare and local Dartford Warbler, and I twice saw a Marsh Harrier.

Coming across the North Atlantic on my way home I saw many Fulmars, Great Shearwater and Manx Shearwater, with hundreds of Gannets on Ailsa Craig and a nice flock of Roseate Terns near the Isle of Man.

Saskatchewan Christmas Bird Count, 1959

Edited by **Mary Houston,** Yorkton.

The best single observation this year was that of Steve Waycheshen, who noted a Barred Owl during his regular count, and then was able to capture the bird so that it could be banded on January 2. Other good owl records were of a Boreal Owl at Prince Albert and a Hawk Owl at Big River. Snowy Owls were unusually scarce and noted only at Dodsland and Melville during the count itself, though seen at Battleford and Bladworth on other days during the Christmas season. Goshawks were also scarce, being seen only at High Hill. Golden Eagles, however, were reported from seven localities and the Pigeon Hawk from four.

In addition to the Barred Owl (incidentally only the fifth record for Saskatchewan), new species not listed during seventeen previous Christmas seasons included a Cooper's Hawk noted by Glen A. Fox and Spencer Sealy at Battleford on Dec. 28, and a Peregrine Falcon noted at Moose Jaw on Dec. 28 and at Regina on Dec. 26. This brings the total of species noted during 18 Christmas seasons to a remarkable 97 species.

Other records of interest include a Sparrow Hawk at Skull Creek, Flickers at Craven, Regina and Moose Jaw, a Robin at Craven and Regina, Cedar Waxwings at Estevan, Regina and Fort San, a Meadowlark at Fort San and Regina, a White-throated Sparrow at Madge Lake, and a Song Sparrow at Spirit Lake. Blackbirds were represented by Brewer's at Saskatoon, Rusties at Craven and Fort San, and Redwings at Craven, Fort San and Skull Creek.

BANGOR, Sask. Dec. 26; about farm and 9 miles by car; temp. 20°; calm, cloudy. 10 species, 234 individuals. Ruffed Grouse, 1; Sharp-tailed Grouse, 5; Hairy Woodpecker, 1; Downy Woodpecker, 2; Black-billed Magpie, 6; Black-capped Chickadee, 4; House Sparrow, 50; Pine Grosbeak, 9; Common Redpoll, 48; Snow Bunting, 108.—**Mrs. A. Thompson.**

BATTLEFORD, Sask. Dec. 26; 8 miles on foot and 23 miles by car in 8¼ hours; temp. 21°; wind N.W. 15 mph.; cloudy, snowing; 6 inches snow on ground. 19 species, 2032 individuals. Golden Eagle, 2; Ruffed Grouse, 2; Sharp-tailed Grouse, 32; Ring-necked Pheasant, 6; Gray Partridge, 8; Rock Dove, 267; Great Horned Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 4; Blue Jay, 2; Black-billed Magpie, 2; Black-capped Chickadee, 15; Bohemian Waxwing, 273; Starling, 1; House Sparrow, 354; Pine Grosbeak, 24; Common Redpoll, 637; Slate-colored Junco, 2; Snow Bunting, 380. (Add: Cooper's Hawk, 1, Dec. 28; Pigeon Hawk, 1, Dec. 27; Snowy Owl, 1, Dec. 24) —**Glen A. Fox, Spencer Sealy (compiler).**

BIG RIVER, Sask. Dec. 30; 1 mile on foot in 1½ hours and 24 miles by truck in 1½ hours; temp. 20°, calm, cloudy. Total, 13 species, 149 individuals. Great Horned Owl, 2; Hawk Owl, 1; Pileated Woodpecker, 2; Hairy Woodpecker, 10; Downy Woodpecker, 6; Blue Jay, 5; Black-billed Magpie, 3; Common Raven, 5; Black-capped Chickadee, 26; Nuthatch (sp.?), 2; Pine Grosbeak, 7; Common Redpoll, 30; Snow Bunting, 50. (Add: Ruffed Grouse, 2; Sharp-tailed Grouse, 8) —**Mrs. Anne Olson.**

BLADWORTH, Sask. Dec. 28; 4½ hours on foot; temp. 16° to 20°; calm, foggy and overcast; 12 inches snow. 8 species, 368 individuals. Sharp-tailed Grouse, 20; Gray Partridge, 41; Great Horned Owl, 2; Downy Woodpecker, 1; Black-billed Magpie, 6; House Sparrow, 27; Common Redpoll, 246; Snow Bunting, 25. (Add: Rock Dove, 17, Dec. 31; Snowy Owl, 1, Dec. 24; Starling, 2, Dec. 31) —**Kenneth, Margaret, Sam and P. Lawrence Beckie.**

CRAVEN, Sask. Dec. 28; 42 party miles on foot and 144 party miles by car in 7½ hours (7 observers in 3 parties); temp. 23° to 25°; calm. 17 species; 672 individuals. Sharp-tailed Grouse, 6; Gray Partridge, 7; Great Horned Owl, 3; Yellow-shafted Flicker, 1; Hairy Woodpecker, 10; Downy Woodpecker, 10; Blue Jay, 1; Black-billed Magpie, 62; Black-

capped Chickadee, 50; Robin, 2; Starling, 1; House Sparrow, 342; Redwinged Blackbird, 2; Rusty Blackbird, 3; Pine Grosbeak, 5; Common Redpoll, 160; Snow Bunting, 7.—**F. G. Bard, F. Brazier (compiler), E. Fox, R. Fox, B. McCorquodale, R. W. Nero, A. Swanston.**

DILKE, Sask. Dec. 25; 2½ miles on foot, by team and horseback, 3 hours by car; temp 25° to 31°; wind 20 to 35 mph.; overcast; 5 inches snow. 8 species, 275 individuals. Gray Partridge, 50; Great Horned Owl, 1; Horned Lark, 3; Blue Jay, 1; Black-billed Magpie, 7; House Sparrow, 190; Common Redpoll, 4; Snow Bunting, 20. (Add: Sharp-tailed Grouse, Dec. 28 and Jan 3; Starling, Dec. 26, 31, and Jan. 3).—**J. B. Belcher (compiler), Mr. and Mrs. S. R. Belcher, Margaret Belcher.**

DODSLAND, Sask. Dec. 23; 2 mi. on foot and 64 by car in 9½ hours; temp. 5°; wind NW 0 to 10 mph.; clear. 13 species, 330 individuals. Golden Eagle, 1; Pigeon Hawk, 1; Sharp-tailed Grouse, 95; Gray Partridge, 19; Rock Dove, 2; Snowy Owl, 2; Short-eared Owl, 2; Horned Lark, 2; Black-billed Magpie, 8; House Sparrow, 4; Hoary Redpoll, 2; Common Redpoll, 42; Snow Bunting, 150.—**Richard Fyfe.**

DUNDURN, Sask Dec. 25; 2 miles on foot; temp. 18° to 20°; wind light. 3 species, 202 individuals. Black-billed Magpie, 2; Starling, 100; House Sparrow, 100. (Add. Sharp-tailed Grouse, Dec. 23; Common Redpoll, Dec. 24, 27, 29, 31, and Jan. 1).—**Edgar W. Sullivan**

ESTEVAN, Sask. Dec. 28; 5 miles on foot in 6 hours; temp. 22°; 18 inches of snow. 8 species, 205 individuals. Sharp-tailed Grouse, 7; Rock Dove, 14; Downy Woodpecker, 3; Black-billed Magpie, 7; Black-capped Chickadee, 9; Bohemian Waxwing, 11; House Sparrow, 132; Snow Bunting, 22. (Add. Mallard, 2, Dec. 30; Gray Partridge, 7, Dec. 31; Cedar Waxwing, 3, Dec. 30; Starling, 12, Dec. 26).—**Darrel Carlson, Ross Lein (compiler).**

FORT SAN, Sask. Dec. 25; 7 miles by car and 1 mile on foot in 2½ hours; temp. 27°; wind S.E.; cloudy; 5 inches snow. 9 species, 125 individuals. Ruffed Grouse, 1; Downy Woodpecker, 1; Black-billed Magpie, 11; Black-capped Chickadee, 3; Cedar Waxwing, 25; House Sparrow, 105; Redwinged Blackbird, 1; Rusty Blackbird, 3; Common Redpoll, 2. (Add: Sharp-tailed Grouse, 2, Dec. 27; Gray Partridge, 8, Dec. 28; Hairy Woodpecker, 1, Dec. 26; Bohemian Waxwing, 2, Dec. 26; Western Meadowlark, 1, Dec. 23; Pine Grosbeak, 1, Dec. 28).—**Dr. G. D. Barnett, E. M. Callin (compiler), Errol Cochrane, Dr. H. D. Jenner, Jack Lowe, S. P. Regan.**

KAMSACK, Sask. Dec. 29; 4 miles by foot; 8 hours; temp. 20° to 30°; no wind; overcast. 11 species, 264 individuals. Ruffed Grouse, 1; Sharp-tailed Grouse, 28; Great Horned Owl, 1; Downy Woodpecker, 1; Black-billed Magpie, 10; Black-capped Chickadee, 28; Bohemian Waxwing, 45; Starling, 2; Evening Grosbeak, 10; Pine Grosbeak, 110; Common Redpoll, 28.—**Lawrence Ostoforoff.**

KEATLEY, Sask. Dec. 24; 25 miles by truck and 2 miles on foot. 7 species, 2308 individuals. Sharp-tailed Grouse, 7; Black-billed Magpie, 9; Black-capped Chickadee, 5; Bohemian Waxwing, 7; House Sparrow, 30; Common Redpoll, 2,000; Snow Bunting, 250. (Add. Golden Eagle, 1; Ruffed Grouse, 1).—**A. P. Pym.**

KELVINGTON - HIGH HILL, Sask. Jan. 2, 1960; 4 hours by car and on foot; temp. 10°; strong wind; overcast. 10 species, 558 individuals. Goshawk, 1; Golden Eagle, 1; Ruffed Grouse, 1; Gray Jay, 1; Black-billed Magpie, 4; Black-capped Chickadee, 4; House Sparrow, 156; Pine Grosbeak, 60; Common Redpoll, 189; Snow Bunting, 150.—**Gary Anweiler, Dr. and Mrs. Stuart Houston (compilers), Anton and Steve Waycheshen.**

KINDERSLEY, Sask. Jan. 3, 1960; 5 miles by foot in 3 hours and 11 miles by car in 2 hours; temp. -10°; wind NW at 10; clear. 9 species, 786 individuals. Sharp-tailed Grouse, 1; Gray Partridge, 57; Rock Dove, 200; Black-billed Magpie, 3; Bohemian Waxwing, 8; Starling, 5; House Sparrow, 410; Common Redpoll, 2; Snow Bunting, 100.—**Glen A. Fox.**

KLOGEI LAKE—HIGH HILL, Sask. Dec. 27; 16 miles on foot in 7 hours; 10° to 20°; wind north; cloudy with

intermittent snow; light and heavy bush and small lakes. 13 species, 28 individuals. Ruffed Grouse, 2; Great Horned Owl, 1; Barred Owl, 1; Hairy Woodpecker, 1; Gray Jay, 2; Blue Jay, 1; Black-billed Magpie, 2; Common Raven, 3; Black-capped Chickadee, 5; Boreal Chickadee, 2; Evening Grosbeak, 2; Pine Grosbeak, 1; Common Redpoll, 5. (Add: Pileated Woodpecker, 1, Dec. 30; Bohemian Waxwing, 36, Dec. 23).—**Steve Waycheshen.**

LEADER, Sask. Jan. 3, 1960. 3 species, 34 individuals. Sharp-tailed Grouse, 8; Ring-necked Pheasant, 16; Black-billed Magpie, 10. (Add: Snow Bunting, 300, Dec. 31).—**Daisy Meyers.**

MADGE LAKE, Sask. (Center on southwest corner of Duck Mountain Provincial Park). Jan. 1, 1960; 46 miles and 8 hours by car, 2½ miles and 2 hours on foot; temp. 10° to 15°; wind north at 5 to 15 mph.; 15 inches of snow. 17 species, 410 individuals. Golden Eagle, 1; Ruffed Grouse, 12; Hairy Woodpecker, 1; Downy Woodpecker, 3; Northern Three-toed Woodpecker, 1; Gray Jay, 6; Blue Jay, 11; Black-billed Magpie, 15; Common Raven, 1; Black-capped Chickadee, 20; Bohemian Waxwing, 86; House Sparrow, 47; Evening Grosbeak, 7; Pine Grosbeak, 12; Common Redpoll, 74; White-throated Sparrow, 1; Snow Bunting, 112.—**Gary Anweiler, Bill Horseman, Dr. and Mrs. Stuart Houston (compilers), Jacob Jmaeff.**

MASEFIELD, Sask. Dec. 29; 3 miles on foot and 48 by car in 6 hours; temp. 28°; wind NNW light; sunny; 6 inches of snow. 9 species, 243 individuals. Golden Eagle, 2; Sharp-tailed Grouse, 3; Ring-necked Pheasant, 21; Horned Lark, 22; Black-billed Magpie, 11; Black-capped Chickadee, 4; House Sparrow, 173; Common Redpoll, 6; Snow Bunting, 1. (Add: Gray Partridge, 5, Dec. 24; Starling, 9, Dec. 28; Cowbird (Rusty Blackbird? —Ed.), 11, Jan 2).—**J. David Chandler.**

MEATH PARK, Sask. Dec. 25; 3¾ miles on foot in 1½ hours and 5 miles by car in 1½ hours; temp. 18°; wind NNE 8 mph.; overcast; 10-14 inches of snow. 9 species, 82 individuals. Ruffed Grouse, 2; Sharp-tailed Grouse, 4; Blue Jay, 2; Black-billed Magpie, 1; Black-capped Chickadee, 4; Bohemian Waxwing, 1; House Sparrow, 14; Pine Grosbeak, 1; Common Redpoll, 53.—**Jim Hrenyk and Pete Hrenyk.**

MELVILLE, Sask. Dec. 28; 8 miles on foot in 5 hours; temp. 10°; wind light; 16 inches of snow. 6 species, 263 individuals. Snowy Owl, 3; Short-eared Owl, 1; Downy Woodpecker, 1; Black-billed Magpie, 5; House Sparrow, 250; Common Redpoll, 3. (Add: Ruffed Grouse, 1; Black-capped Chickadee, 3).—**Gary Anweiler.**

MOOSE JAW, Sask. Dec. 26; 6 miles and 4 hours on foot (14 observers in two parties); temp. 24; wind NW at 5 to 10 mph; overcast with light snow. 11 species, 249 individuals. Sharp-tailed Grouse, 12; Ring-necked Pheasant, 4; Gray Partridge, 4; Rock Dove, 75; Yellow-shafted Flicker, 2; Downy Woodpecker, 1; Black-billed Magpie, 35; Black-capped Chickadee, 10; Golden-crowned Kinglet, 2; House Sparrow, 100; Common Redpoll, 4. (Add on Dec. 28: Peregrine Falcon, 1; Barred Owl (?) 1; Bohemian Waxwing, 12; Starling, 24, Pine Grosbeak, 4.)**Carl Ellis (compiler), John Ellis, Dr. and Mrs. D. M. Ewart, Patty Ewart, Douglas Ewart, Neil Farrell, John Horton, Patrick Kennedy, Mrs. A. J. Rankin, Miss Molly Ritchie, Mrs. D. Rhodes, Mrs. Remington Walker** (Moose Jaw Natural History Society.)

NIPAWIN, Sask. Dec. 26; about town; mild; snow falling; one foot of snow on ground. 12 species, 175 individuals. Ruffed Grouse, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Gray Jay, 1; Blue Jay, 2; Black-billed Magpie, 1; Common Raven, 5; Black-capped Chickadee, 11; House Sparrow, 100; Evening Grosbeak, 6; Pine Grosbeak, 23; Common Redpoll, 22.— **Maurice G. Street.**

PRINCE ALBERT, Sask. Dec. 27; 6 miles by car in 2½ hours; temp. 15° to 25°; 12 inches of snow. 8 species and 29 individuals. Rock Dove, 2; Boreal Owl, 1; Black-billed Magpie, 1; Boreal Chickadee, 6; House Sparrow, 2; Evening Grosbeak, 2; Pine Grosbeak, 6; Common Redpoll, 9. (Add on Dec. 28: Gray Jay, 1; Black-capped Chickadee, 6; Bohemian Waxwing, 30).—**E. W. Brooman, A. Capusten, E. Evasiuk, D. Karasiuk (compiler.)**

REGINA, Sask. Dec. 26; 44 miles on foot and 135 by car; 32 party hours on foot, 45 by car; temp. 26°, wind NE at 10; 4-10 inches snow; 23 species, 2112 individuals. Horned Grebe, 1; White Pelican, 2; Whistling Swan, 3; Mute Swan, 4; Canada Goose, 185; Mallard, 300; Pintail, 1; Prairie Falcon, 1; Peregrine Falcon, 1; Gray Partridge, 8; American Coot, 1; Yellow-shafted Flicker, 2; Downy Woodpecker, 3; Black-billed Magpie, 27; Black-capped Chickadee, 16; Robin, 3; Bohemian Waxwing, 26; Cedar Waxwing, 3; Northern Shrike, 1; House Sparrow, 1520+; Western Meadowlark, 1; Common Grackle, 1; Evening Grosbeak, 1.—**F. Brazier, E. Cruickshank, H. Erikson, E. L. Fox (compiler), R. Fox, R. Knutson, G. F. Ledingham, R. McCall, J. Moore, R. W. Nero, C. Willway.**

SASKATOON, Sask. Dec. 26; 9 party miles on foot in 10 hours, 114 party miles by car in 11¾ hours; 23 observers in six parties; temp. 20°; wind NW at 10 mph.; overcast; snowing; 8 inches of snow on ground. 16 species, 1,581 individuals. Mallard, 9; Pigeon Hawk, 1; Gray Partridge, 23; Rock Dove, 22; Blue Jay, 2; Black-billed Magpie, 35; Black-capped Chickadee, 17; Bohemian Waxwing, 148; Northern Shrike, 2; Starling, 2; House Sparrow, 775; Brewer's Blackbird, 1; Pine Grosbeak, 19; Hoary Redpoll, 2; Common Redpoll, 523; Snow Bunting, 1.—**A. Binnie, Dr. R. M. Bremner, Murray Cox, Betty Gerrard, Dr. J. Gerrard, Jonathan Gerrard, George Gerrity, Ross Gerrity, J. B. Gollop, Michael Gollop, Mrs. V. Harper, Grace Hogg, Jim Hogg, Jean Mackenzie, H. McLennan, Michael Miller, A. Plumstead (Toronto), W. Plumstead, J. F. Roy (compiler), John Shadick, Lindy Lou Wedge, Terry Wedge, T. Wedge** (Members and friends of the Saskatoon Natural History Society.)

SKULL CREEK, Sask. Dec. 27; 4 miles on foot and 5 by car in 2½ hours, plus observations in four farmyards; temp. 26°; wind light; clear; no snow. 15 species, 787 individuals. Rough-legged Hawk, 2; Pigeon Hawk, 1; Sparrow Hawk, 1; Sharp-tailed Grouse, 55; Ring-necked Pheasant, 5; Gray Partridge, 14; Great Horned Owl, 3; Downy Woodpecker, 3; Black-billed Magpie, 63; Black-capped Chickadee, 34; Bohemian Waxwing, 119; House Sparrow, 385; Pine Grosbeak, 3; Common Redpoll, 57; Snow Bunting, 42. (Add: Golden Eagle, 2, Dec. 23; Prairie Falcon, 1, Jan. 1; Short-eared Owl, 2, Dec. 24; Horned Lark, 2, Jan. 2; Northern Shrike, 1, Dec. 22; Red-winged Blackbird, 1, Dec. 20.)—**Mrs. Lena Bennetto, Betty and Bob Mann, Mr. and Mrs. S. A. Mann (compilers), Henry Porman, Helen and Ray Schuler, Reid Shearwood, Peter and Donna Swain, Harry Williams, Kenny Wright.**

SPIRIT LAKE, Sask. Dec. 27; 9 party miles in 9 hours; temp. 20°; moderate north wind and light snow; 11 inches of snow on ground. 14 species, 301 individuals. Ruffed Grouse, 6; Sharp-tailed Grouse, 19; Great Horned Owl, 1; Hairy Woodpecker, 6; Downy Woodpecker, 7; Black-billed Magpie, 5; Black-capped Chickadee, 63; White-breasted Nuthatch, 1; Bohemian Waxwing, 2; House Sparrow, 41; Pine Grosbeak, 6; Common Redpoll, 18; Song Sparrow, 1; Snow Bunting, 125. (Add: Evening Grosbeak, Dec. 26.)— **Bill Anaka, Joyce Gunn, June Popowich.**

STRUAN, Sask. Dec. 24; 5 miles by car and 6 miles on foot; temp. 15°; wind SE at 10 mph.; very little snow; clear. 9 species, 155 individuals. Ruffed Grouse, 2; Sharp-tailed Grouse, 4; Rock Dove, 3; Great Horned Owl, 1; Black-billed Magpie, 5; Black-capped Chickadee, 2; House Sparrow, 39; Common Redpoll, 94; Snow Bunting, 5. (Add: Gray Partridge, 6, Dec. 23; Bohemian Waxwing, 4, Dec. 26; Starling, 2, Dec. 27.)—**William E. Jasper.**

WOODROW, Sask. Dec. 26; on foot 18 miles along Wood River and Pinto Creek and return by car; temp. 26°; wind NNW 20 mph.; lightly overcast. 8 species, 449 individuals. Golden Eagle, 2; Sharp-tailed Grouse, 2; Ring-necked Pheasant, 55; Gray Partridge, 8; Owl (sp.?), 6; Black-billed Magpie, 20; Black-capped Chickadee, 6; House Sparrow, 250. (Add: Snow Bunting, 75, Dec. 23.)— **Fred C. Parchman.**

YORKTON, Sask. Dec. 26; 8½ party miles in 5 hours on foot, 71 party miles in 10 hours by car; 15 observers in 4 parties; temp. 24°; wind N at 10 mph.; 10 inches of snow. 10 species, 1498 individuals. Ruffed Grouse, 7; Gray Partridge, 16; Great

Horned Owl, 2; Downy Woodpecker, 1; Black-billed Magpie, 8; Black-capped Chickadee, 14; Bohemian Waxwing, 6; House Sparrow, 1156; Common Redpoll, 119; Snow Bunting, 169. (Add: Hairy Woodpecker, 1, Dec. 28.)—**Gary Anweiler, Henry Chilman, Jr., Tom Cursons, Archie Fraser, Art Gellert, Dr. and Mrs. Stuart Houston (compilers), Dr. C. J. Houston, Stanley Houston, Phil Pawluck, Elwood Sharpe, Jeff Smith, Donald Swaby, Frank Switzer, Guillain Switzer** (Yorkton Natural History Society.)

Distraction Display By Western Meadowlark

By **Sam Alberts,** Brooks, Alberta

I was very interested in the article in the September, 1959, issue of the **Blue Jay** by Robert Nero "Distraction Display by Western Meadowlark." On the evening of July 27, 1959, I drove my truck up to the edge of a field that I was starting to irrigate. I noticed a meadowlark fly up and then come down to the ground and start doing the broken wing act as it went through the grass. My first thought was that it was a young one and that I had run over it, then I noticed it fly up on to a fence post so I knew it wasn't injured. It being so late in the summer I didn't think there would be a nest. However, when the same thing happened the next day I started looking for a nest, and found that if I had driven about two feet further I would have run over it. There were three young that looked about half-grown. I drove up to the same place about a dozen times on the 28th and 29th and each time the mother bird went through the same antics. At the time it seemed rather odd to see a meadowlark doing this broken wing act, but I did not know it was such an unusual thing or I would have watched it more closely and tried to get some pictures. We left for a few days holidays on the 30th and when I came back on August 7 the nest was empty.

Note: Readers may be interested in similar report for the Western Meadowlark by J. M. Linsdale (1938. Environmental responses of vertebrates in the Great Basin. Amer. Midland Nat., 19:1-206). On page 127 Linsdale states: "A brooding bird flew up just as it was almost stepped on. It landed 2 feet away and ran, fluttering along the ground for 50 feet, disappearing beneath a clump of buffalo berry." And Du Bois, quoted by A. C. Bent (1958. Life histories of North American blackbirds, orioles, tanagers, and Allies, U.S. Nat.' Mus. Bull. 211:36) describes nearly identical behaviour for the Bobolink: "The female jumps over the grass for a distance of three or four feet, then hobbles along in the grass; and, if I follow her, she repeats this—and continues to repeat until we are perhaps a hundred feet from the nest, then she flies for a short distance. This is the pattern of her ruse.' " Bent points out that one reason for the difficulty of locating Bobolink nests is the female's habit of running through the grass for some distance from the nest before flushing (loc.cit: 35).

It seems apparent that in these two species this type of "distraction display" provides an effective means of escape from the nest (thus saving the nest), at least in some types of cover, as well as being a ruse to lure away predators.

R. W. Nero.

A Visit to a Greater Prairie Chicken Booming Ground

By **Kathleen Hodges,** Calgary

Photo by K. Hodges

GREATER PRAIRIE CHICKEN ON BOOMING GROUND

Booo ah ooom — booo ah ooom— booo ah ooom! This was the sound that I had travelled over a thousand miles across the prairies to hear. This sound was enough to convince me that the trip in chilly April was worthwhile. Watching Prairie Chickens on their booming grounds from a few feet for the first time was a wonderful experience not soon to be forgotten. For a day or two, at this booming ground in Minnesota, the North Star State, Spring managed to push Winter aside.

Contrary to what I had read, this booming ground—the first I had ever visited—was not on a rise or eminence of land or a bare knoll, but was in a shallow depression, immediately behind what is known as the Campbell shoreline, the most recent shoreline of ancient Lake Agassiz. In this slight depression, surrounded by bluffs of willows, elm, poplar, dogwood and other shrubbery, were two small temporary sloughs through which the closely cut hay was only just beginning to peek. Minnesota, a Sioux Indian word, is poetic, meaning sky-tinted water or cloudy water. This then was a perfect setting for the Prairie Chicken booming ground, between two sky-tinted sloughs reflecting the clouds.

Two hours before the sun gleamed above the horizon the birds had already gathered on their ancestral booming grounds, and in the light of the full moon, their shadowy forms could only just be detected. Some returned by flying directly to the territory which they claimed. Some advanced slowly, sometimes unconcernedly walking through the shallow, sky-tinted water. The constantly repeated, low, undulating, resounding booming started soon after their arrival. Though the booming is low it is loud and it is said to carry a distance of two miles on a calm morning. In my position in the middle of the booming area, it was, at the height of the booming, like being suspended in the centre of a large base drum while the drummer rhythmically rolled and beat the drumsticks across its surface. Interjected in the booming chorus were many high-pitched "ca-cas" made by the birds as they took up their positions, and these sounded like noises made by an excited but restrained chicken

in its effort to escape. These unusual "ca-cas" carry far in the morning stillness, and some people can hear them before the booming.

When the males dash at one another along tiny, well-worn paths to meet on territorial borderlines, they greet each other with a grunt. The spectacular orange-like air sacs in the neck are inflated, the pinnate feathers which normally lie along the neck are raised vertically above the head, the feathers of the tail are fanned out and stiffly erected and the wings are spread and drooped to the side. They then have the amusing appearance of rabbits preparing for the next jump, head held low and body hunched up. Their dancing feet make an unusual pattering sound as they run to and fro on the damp ground. As I watched two females strode across the extensive booming area and booming increased in tempo; I was then favoured to hear and see these birds at their ultimate best. There was much excitement as the male birds on the outskirts moved in. Territories became divided and subdivided as more birds sought to establish themselves closer to a female. These new territories were only gained after prolonged fights which saw feathers fly. The male bird within whose territory the female lingered became very active and threatening on the approach of any other birds. He was a large handsome male and was thoroughly successful in his home-defence program and capable of retaining a fairly large area. Birds outside of the territory of the favoured male frequently jumped into the air with a slight flutter of wings and a harsh cackle, in an apparent effort to attract the female. This action seemed to have no effect on the nonchalant female.

At one point, when the birds became silent and motionless, I looked around as much as I could from my confined space and happened to see a Marsh Hawk make a pass at one of the birds. The Prairie Chicken flew off but returned shortly afterwards.

While waiting in a blind one sometimes witnesses amusing incidents. One afternoon while thus waiting I could see some children with their dog approaching my Volkswagen bus parked beside a haystack on the shoreline ridge above the booming grounds. School was apparently out and they had come along on an inspection tour. Their first stop was my bus where they climbed upon the bumpers front and back and gave it a thorough inspection inside and out. A consultation followed, they looked

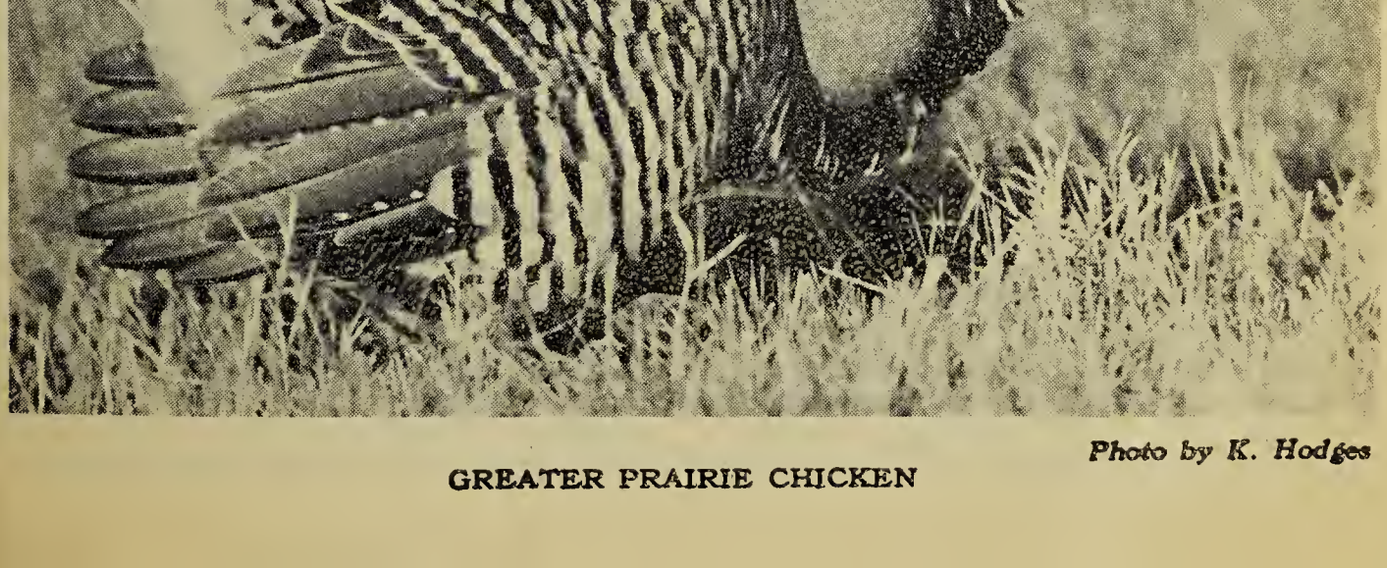


Photo by K. Hodges

GREATER PRAIRIE CHICKEN

and pointed towards my blind and then headed in its direction. It looked as if my hide-out would be their second stop. I watched them pick their way carefully around the slough in an effort to keep their shoes dry. There were four and they ranged in age from five to eight. As they came closer I heard one say, "It looks like it's made of cardboard" and other indecipherable remarks. As they got within speaking distance, the boy of the group boldly said, "Anybody home?" I had withdrawn my telephoto lens as the boy was carrying a stick and I didn't know just what to expect. He said again, "Anybody there?" to which I answered with a "Yes!" I guess they didn't expect the blind to be inhabited, and with a few startled gasps they took to their heels and didn't stop until they got back up on the ridge some distance from the bus. Nor did they pick their way carefully around the slough, but headed straight through the middle. It was the most direct route towards home. Home I believe was their third stop. I guess I was as surprised as they at this reaction and I chuckled as I looked out of the peep-hole and saw them splashing their way through the slough.

Spring on the prairies comes late. Bursting tree buds and a lush growth of grass are not visible until late May. But the first signs of Spring are evident in April and I noted Flickers arriving daily for a brief stop-over in migration, as many as a dozen being seen at one time clumsily walking over the hay meadow, or flitting through the trees. Western Meadowlarks were singing from vantage points.

In North Dakota another booming ground was visited where the birds executed their elaborate and interesting mating ritual on newly ploughed land, an adaptation that was unexpected. Wherever their booming grounds may be, the birds all seem to leave their chosen spot soon after day-break.

Formerly found from the Atlantic States through the Great Plains of North America, they are now confined largely to the Great Plains regions. This is the bird to which, by precedence and by custom, rightfully belongs the name Prairie Chicken. From the long feathers on its neck it has also received another name—Pinnated Grouse. And to distinguish it from the Sharp-tailed Grouse, it is sometimes called the Square-tail. It is larger and darker than the Sharp-tail and the inflated air sacs, seen only during the dancing ritual, are a vivid orange rather than lilac as in the Sharp-tail.

In my notes of birds seen on this thoroughly enjoyable holiday, Marsh Hawks predominate. A rather remarkable flight of Snow Buntings was witnessed west of Winnipeg, where several flocks containing thousands of these birds flew across the ploughed fields. The fields were a rich black, still wet from the melting winter snows, and against this background the "snow birds" made a charming sight, looking like large fluffy snowflakes that come with a spring snowstorm. The warm welcomes with which I was everywhere received contrasted sharply with the exceptionally cold April weather, and I am indeed most grateful to the many folks who helped me in so many ways on this trip.

DETERMINED DANCERS

By **Lindsay Wotherspoon,**
Crestview, Man.

We have a Sharp-tailed dancing ground on our farm and 20 to 25 birds congregated there last spring. As I was seeding the field on May 27, 1959, I seeded right through their acre-sized "dance hall," but they did not interrupt their manoeuvres except to keep out of the way of the tractor and drill. I watched the birds so intently that I made some pretty crooked seed rows.

Our farm is at the northern edge of settlement, on the edge of the Porcupine Mountains, 20 miles north and four miles east of Arran, and just one and a half miles west of the Manitoba border (N½ 11, T.37, R. 30, W. 1). The farm is really in Saskatchewan though we get our mail at a Manitoba post office, Crestview.

A Prairie Chicken at Old Wives Lake

By **Roger Tory Peterson**

In 1953 when James Fisher and I made our marathon journey around the perimeter of "Wild" America, we compiled a total list of 601 species in exactly 100 days. There were very few North American birds left for my British colleague to see when he attended the A.O.U. meetings in Regina this last August. However, the northern plains had been the greatest omission on our lethal tour and therefore he expressed a desire to see six or seven species which would be new to him. These were the Lark Bunting, Baird's Sparrow, Chestnut-collared Longspur, McCown's Longspur, Sprague's Pipit, Sharp-tailed Grouse and Pinnated Grouse. I informed him that we had a fair chance to see all but the latter bird.

It was with such a pronouncement in his ears that we started for Old Wives' Lake on Tuesday, August 25, the opening day of the convention. While the council meetings were on, Dr. Walter Breckenridge, James Fisher and I slipped out for a few hours in the field. Dr. Breckenridge particularly wanted to document photographically an outbreak of botulism at Old Wives' Lake. We drove west from Regina to Moose Jaw and then south to Bishopric. We could see the broad lake in the distance, but our directions were vague and we floundered about on dirt roads trying to reach its margin. While still three-quarters of a mile from the east side of the lake, Dr. Breckenridge let us out of the car for a bit of birding on foot while he went down a side road to a ranch house to ask directions.

Curiously enough, a few minutes before, I had wondered about why there shouldn't be Prairie Chickens here. We agreed that it was one of the best looking bits of original prairie we had seen, unplowed and not overgrazed. But Baird's Sparrows were on our minds when we crossed the fence and walked toward a depression where several cattle were grazing. Trying to flush sparrows from a patch of very low shrubs, I jumped a cock Pinnated Grouse. It was within 100 feet of me when it flushed and close enough to see its handsome barrings. I yelled to James Fisher who was off to one side and told him to take note of the short rounded dark tail. This we both saw well.

The bird scaled over a nearby rise and went out of sight. We did not flush it again.

Although I had not expected to see a Pinnated Grouse I had not realized how good our find was until Dr. Frederick Hammerstrom informed me that there had not been a reliable record in the region in more than ten years. Curiously enough, James Fisher never did see a Sharp-tail during his week in Saskatchewan.

CO-OPERATIVE BIRD MIGRATION STUDY

For the past seven years, hundreds of observers throughout the continent have co-eparted in a spring migration study for a selected list of species of birds, carried out under the auspices of the U.S.A. Fish and Wildlife Service. This year the *Blue Jay* is again participating in the study, and members of the Society are urged to keep migration dates and submit their records to us. Information is requested on first seen dates, and if possible dates of peak migration and final departure. Information is wanted on the following species: Whistling Swan, Canada Goose, Mallard, Pintail, Marsh Hawk, Killdeer, Common Snipe, Mourning Dove, Common Nighthawk, Chimney Swift, Ruby-throated Hummingbird, Yellowshafted Flicker, Eastern Kingbird, Great Crested Flycatcher, Eastern Phoebe, Western Wood Pewee, Barn Swallow, Purple Martin, Common Crow, House Wren, Catbird, Brown Thrasher, Wood Thrush, Eastern Bluebird (male), Eastern Bluebird (female), Red-eyed Vireo, Black-and-White Warbler, Yellow Warbler, Myrtle Warbler, Ovenbird, American Redstart, Redwinged Blackbird, Baltimore Oriole, Scarlet Tanager, Rose-breasted Grosbeak, Indigo Bunting, American Goldfinch, Slate-colored Junco, Chipping Sparrow, White-crowned Sparrow, White-throated Sparrow.

Send Reports to Dr. STUART HOUSTON, Box 278, YORKTON, SASK.

The Great Gray Owl of the Woodlands

By **Clifford Law,** Choiceland

Photo by A. F. Oeming
GREAT GRAY OWL

In the last twelve years, in the mild weather of early winter between November 15 and December 20, I have seen no less than 15 Great Gray Owls. Usually I see just one each fall, but last fall (1959) four of these owls were seen around the buildings and sitting in trees along the edges of the grain fields. As the cold, windy weather sets in, the owls move away to more sheltered places.

My farm is located along the north boundary of Fort a la Corne Game Reserve, eight miles southwest of the town of Choiceland. The Fort a la Corne Game Reserve has dense bluffs of spruce, poplar, pine and tamarack with many open meadows, making an ideal place for the Great Gray Owl to spend the winter months—well sheltered, and with an abundance of meadow mice.

Few people have ever seen the Great Gray Owl and perhaps some who have seen it have mistaken it for the Great Horned Owl which is similar in size. As most people are familiar with the Great Horned Owl a comparison of the two species may be helpful. I want to describe the noble and beneficial Great Gray Owl as completely as possible so that everyone can recognize and help to protect it.

In appearance the Great Gray is a very large owl, larger than the Great Horned. The writer once measured a specimen taken for a museum; the wing span was 47 inches and the length of the owl 23 inches. The appearance, however, is rather deceiving for the owl looks big chiefly because of its very bulky feathers, its weight being no greater than a Great Horned Owl.

The two sexes are different in size and colour—one being larger and darker, and the other (presumably the male) being smaller and lighter in colour. These smaller birds are about the same size as a full-grown Great Horned Owl.

The most conspicuous features of the Great Gray Owl are its large round head and its very dark feathers. The width of the owl's head would be between five and six inches across the face, and the neck is even wider—perhaps eight inches at the base. Because of the thick head feathers, the face looks flat and sunken. Unlike the Great Horned Owl, the Great Gray Owl has no feathered tufts on the top of its head. This is the easiest way to distinguish these two large owls. The feathers on the owl's back are very dark grey from the head to the wings, becoming a brownish grey from the base of the wings to the tail, and a lighter brown and grey on the tail itself.

Again on the front, the feathers are very dark grey (almost black) down to the breast. Below the beak there is a band of pure white feathers about three-quarters of an inch wide across the owl's face, looking at a distance like a white moustache. This

strip of white is narrower and shorter in some birds (perhaps the females?). From the breast to the legs, the feathers are steel grey. Two streaks of brown, about two inches apart, run down the breast to the legs. The underside of the tail is light brown-grey. The feathers on the legs are fine, close and greyish brown. The feathers on the toes and between the toes are also short and dense, but dark grey in colour. The toes are rather short, with curved needle-sharp talons for hunting its prey.

The Great Gray Owl flies quite slowly. When it is flapping its wings, the wing flaps are much like a Sandhill Crane's, or a wild goose's, but it does about eighty per cent of its flying by just gliding. The Great Horned Owl flies with rather fast, jerky flapping of the wings.

Another great difference between the two owls is in the way they perch in the trees. As dusk approaches the Great Horned Owl flies out of the dense timber and perches on the top of a high tree or tall stump near a field in stubble or swath. From this position it can quite easily see its next victim—be it rabbit, mouse, red squirrel, rat or bird—all of which are on its menu.

The Great Gray Owl's manner of perching is almost the very opposite. It rarely flies to the top of a high tree, but selects a side limb of a fair-sized poplar or spruce eight to twelve feet from the ground. From there it sails out to the stubble or swathed grain field to catch a mouse.

The Great Gray Owl's hearing is very acute. For this reason, its method of hunting differs from that of the Great Horned Owl. Ninety-five per cent of the time, the Great Horned Owl gets its food by seeing its victims, whereas the Great Gray Owl locates its food by hearing only. At least, it seems to depend on hearing in the early winter when eight to twelve inches of soft snow covers the grain fields and meadows. As the Great Gray Owl sits, slowly turning its head from side to side and sometimes looking straight down below it, we learn to know that it is picking up the sound of a mouse chewing up straw or grain. Silently it sails off its perch to a distance of about sixty yards, hovers over a spot for a few minutes and then drops suddenly down into the soft snow. After remaining motionless for a couple of minutes, it slowly raises one foot out of the snow with a dead mouse in its talons. The owl then proceeds to swallow the mouse whole, and after that it flies back to its perch or to another tree limb nearby. This performance may go on for hours, as at least two-thirds of the owl's victims escape for various reasons such as deep snow, a protecting straw or chaff cover over the mouse, or the frozen crust of snow. The owl keeps on hunting until it catches enough mice to satisfy its hunger for several hours—perhaps eight or ten mice—and then flies a few rods into deeper timber where it will doze for several hours in a fair-sized tree.

The Great Gray Owl's diet seems to consist wholly of mice. On several occasions I have seen chickadees and juncos in the same tree only a few feet away from the owl but making no commotion. They merely seemed curious about the owl. The owl, for its part, didn't pay the slightest attention to these small birds. I have also seen Blue Jays in the same tree which showed no signs of fear of the owl, and the owl made no move to attack them. On another occasion I saw nine Ruffed Grouse eating at an oat stack with a Great Gray Owl perched twelve feet up in a poplar not more than four rods away. The grouse watched the owl from time to time, but showed no alarm, and the owl didn't pay the least attention to the grouse. After very close observation of the Great Gray Owl, the writer feels that this owl does not prey on birds, and that it can be rated as one hundred per cent beneficial to the farmers.

Great Gray Owls show very little fear of man, and it is quite easy to walk up to a tree they are sitting in. Apart from man, these owls have few enemies. I have seen a Goshawk on several occasions making dives at one, but the owl merely ruffled its feathers and ducked its head, until the Goshawk moved on. Ravens have been seen flying with the owl, but never diving at it.

In the first week of May, 1949, I found a Great Gray Owl's nest in the Fort à la Corne Game Reserve. The owl had used a vacated hawk's nest

about twenty-six inches across built at the base of three large limbs and against the tree trunk about twenty feet up in an Aspen Poplar which would measure about fourteen inches at the base. One Great Gray Owl was sitting on the nest, and the mate on a limb close by. When I was about twenty yards from the tree with the nest, the owl sitting on the limb lowered its wings, ruffled its feathers and started to snap its beak. The owl on the nest did not leave. There was no way to climb the tree to see whether there were eggs or young. Since spring work had started on the land, I did not get back to visit the nest again.

The nest tree was located in a small poplar bluff with trees of varying sizes, surrounded by a thick stand of spruce. The poplar and spruce together covered five acres, an area surrounded on three sides by open meadows. The protection offered by the bluff, and the plentiful supply of mice in the meadows nearby, made this an ideal nesting site.

All my observations of the Great Gray Owl prompt me to say, to farmers in particular, and to all wildlife lovers and big game hunters—do not kill this owl; it should be fully protected.

FURTHER REPORTS OF GREAT GRAY OWLS

By **Maurice G. Street,** Nipawin

With a number of reports of Great Great Owls coming in this year, I believe you will be interested in the following. In November (1959) Miss Ann Matthews of Nipawin saw four Great Gray Owls in a distance of one mile while driving north of the C. Stuart Francis farm at Torch River. They were all seen sitting on tree stumps quite close to the road. Also in November, Walter and Billy Matthews came upon a Great Gray caught in a trapper's mink-set, while hunting along the Torch River. This bird was removed from the trap, one damaged leg was amputated, and the bird was then released in quite good condition. The Matthews also saw another Great Gray in December, in the same general region.

On November 20, 1939, I saw my first Great Gray Owl (in the wild state) 14 miles northeast of Nipawin. This one was also sitting on a tall tree stub overlooking an unharvested grain field. The time was late afternoon. Then on December 17, shortly after dark, one sat for a time on my television antenna which is 65 feet above ground level. I saw it quite clearly in the beam of my flashlight.

When I was speaking to Louis Aasen, a trapper in the Mossy River area, recently, he told me large owls were very abundant along the Mossy River north of the Torch River. These owls may have been Great Horned Owls or Great Grays, or both. Great Horned Owls are very scarce here about Nipawin and along the Torch. There are great numbers of the Snowshoe Rabbit throughout this entire region.

Editor's Note: Note also C. Stuart Francis' record of the Great Gray Owl at Spruce Dale Farm (Torch River, Sask.) on page 3 of this issue.

CONTROL OF MAGPIES BY GREAT HORNED OWLS

The role of the Great Horned Owl in controlling magpie populations is shown in a recent study of magpie ups and downs made in Montana by Dr. John Craighead, Leader of the Montana Co-operative Wildlife Research Unit (Robert L. Brown. Magpie ups and downs. Montana Fish and Game Dept. Info. Bull.#3, not dated). The extent of predation by Great Horned Owls was studied by tethering young owls on the ground below their nests. Both adult birds continued to feed and protect their young; hence food remains and pellets could be examined to see what the young owls had been fed. In this way it was found that 57 magpies were included in the food items of eight young owls during three weeks of the nesting season (1956, 1957). Few people appreciate the role Great Horned Owls play in reducing annual magpie surpluses. [Ed.]

Great Horned Owl

Photo by H. Dommasch and A. Dziadyk

A Plea to Banders for Caution in Handling Great Horned Owls

By **Dick Lumsden**, Edmonton, Alberta

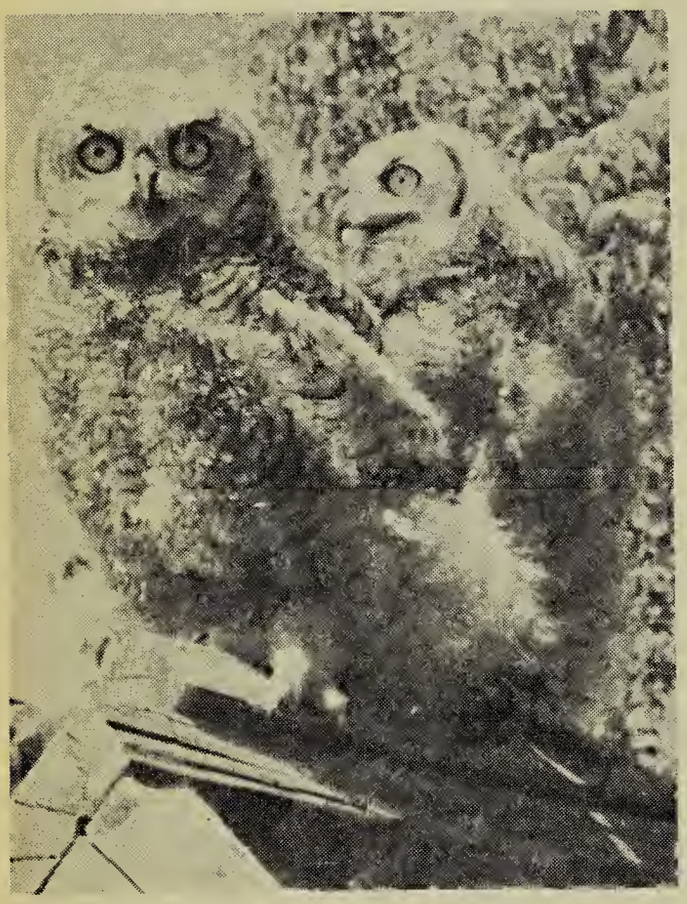


Photo by Dick Lumsden
YOUNG HORNED OWLS

I have been a bird and mammal enthusiast for the past six years and have been particularly captivated by Alberta's winged predators, especially owls. In the past four years I have reared five homeless Great Horned Owls, six Burrowing Owls, two Saw-whet Owls, a Boreal Owl, a Long-eared Owl, a Red-tailed Hawk, a Marsh Hawk, and have trained several falcons and hawks for Al Oeming.

Another activity I engage in is banding, and I am going to tell about an evening trip I made with three friends to a local Horned Owl's nest. At 7.30 on May 14 we arrived at the first nest and banded one young bird without a single attack from the mother owl, then set off for a second nest near Spruce Grove. We arrived at the base of the second nest at sundown (9.10 p.m.).

The bulky nest was situated at the top of a 50-foot balsam poplar in a large forested area of tangled willows, spruce, tamarack and patches of muskeg. The parent birds could neither be seen or heard, so I decided to climb to the nest. I wore climbing spurs, a waist belt, a safety belt and a leather jacket, but neglected to wear a hat. Fastened to a clasp in the waist belt was a 60-foot length of rope attached to a small satchel to be used for lowering the owls so that they could be banded.

When I was half-way up the huge tree one of the three young owls plopped out of the nest and was promptly banded. I reached the nest and gently stuffed a plump young owl, about four weeks old, into the satchel. I lowered the bag carefully, avoiding intervening branches, and owl number two was banded and returned to the nest.

I threw down several pellets from the nest, which were later found to contain mainly Varying Hare (70%), mouse (20%) and weasel (5%), as well as remains of freshly-killed Ruffed Grouse (1-3%). Ruffed Grouse were very abundant in the surrounding bushland.

I then grabbed the third and last young owl, but my grip was awkward and I placed the owl on a nearby branch to get a better hold. It lost its balance and tumbled down to the top branch of a flimsy poplar directly below me. There it clung desperately with its already powerful claws.

Still there were no signs of the parent owls and a Saw-whet was melodiously piping in the distant spruces all the while. The top branches of the slim poplar below sagged under the young owl's two-pound weight. One of my friends shook the tree vigorously and the young owl shot back and forth like a fly on the end of a mule-driver's whiplash.

Just then the mother owl flew in from the west with her mate trailing behind. Both alighted on the top branches of a balsam poplar 50 feet to the north of me. Mother owl's first impression of the situation enraged her thoroughly—one of her young on

the ground, one being mistreated and threatened in the slender poplar tree, and only one left in the nest. The lad shaking the tree stopped, climbed the tree, retrieved the young owl and number three was banded.

Meanwhile mother owl hooted ferociously in deep tones, and her vocal threats became more fearsome. Suddenly she flew in and slashed my left hand, then perched once more to the south as I was busily preparing to climb down.

Blackness had enveloped the spruce bush, but the horizon and silhouetted treetops were still visible. The big yellow eyes of the second adult owl looked fierce as W-H-I-S-H he rushed by. I turned my eyes away from the parent owls for five seconds to find the clasp on my safety belt so that I could climb down more quickly. When I looked up a black figure was speeding swiftly from the shadows and smashing into my face with her talons, her whole body's momentum behind them. One talon pierced my left eye, blinding me instantly. It had only taken the owl two seconds to fly 50 feet from her aerial perch to strike me, and I had not seen her in time to defend myself.

One hour later in hospital a well-qualified surgeon sutured the laceration and told me that any vision in the injured eye would develop by the grace of God and not by his skill. After the first month in hospital vision had improved to about 5%; today, on July 16, vision in the injured eye has improved greatly to about 20-25%, with good peripheral vision. I have had to lead a quiet life during the past two months and of course I missed my Grade 12 finals.

From my experience, and in the best interests of those who share my enthusiasm for winged predators, I make the following recommendations:

(1) Never climb a Horned Owl's nest at night, especially if young are present.

(2) When climbing up to a Horned Owl, Goshawk, Pigeon Hawk or even a Crow's nest wear a safety mask, either a hockey goalie's plastic mask or a strong-meshed fencer's mask.

(3) Wear a heavy pair of leather gloves, preferably welder's gloves used in falconry.

(4) Wear climbing spurs if necessary.

(5) Wear a tough leather jacket.

(6) Break off a branch on the way up to a Horned Owl's nest in order to strike the female if she attacks, as this will usually discourage further attacks.

Horned Owls disturbed at their nest by humans mean business, and their maternal instinct is so strong that they will risk their lives to protect their young. They are crafty in their attack strategy and may strike from unexpected angles, ripping at any flesh they can seize. The value of a mask for protection is thus immeasurable.

(***Editor's Note***: **We are pleased to note that Dick's enthusiasm for wildlife has not waned in spite of this personal injury.)**

Hybrid Duck

A challenging problem in identification was posed by the appearance of an unusual duck on Wascana Lake, June 1, 1959 (**Blue Jay**, XVII:98). The skin and carcass were sent from the Saskatchewan Museum of Natural History to Dr. Philip S. Humphrey of the Peabody Museum of Natural History at Yale University, who wrote in reply to Dr. Nero:

"I received the skin and carcass of the hybrid duck last week. It is certainly a very curious beast. I have examined it carefully and discussed the matter in detail with Dillon Ripley. He and I both agree that the bird can only be a Muscovy-Mallard hybrid. The fact that the bird is a female accounts for its small size. The bird clearly has far more Muscovy in it than Mallard, although the beak is more like that of a dabbling duck than that of a Muscovy. Quite frankly, detailed comparison of specimens did not enable me to tell whether the dabbling duck member of the cross was Mallard or Black. Our main evidence for thinking that it must have been a Mallard is distributional rather than morphological."

Summer Records of the Sandhill Crane in Saskatchewan

by **Lawrence H. Walkinshaw**, Battle Creek, Michigan

There are a number of Sandhill Crane records from Saskatchewan during the summer months. There are few recent nest records. The breeding subspecies is the Greater Sandhill Crane (*Grus canadensis tabida*) but the size of some eggs collected and of one female taken at a nest indicate it is possible that the Lesser Sandhill Crane (*G.c. canadensis*) may nest farther south than supposed. A few summer specimens could help solve this problem but the species has been too rare as a breeder to be collected in any numbers. The following records are those we have obtained for summer birds or nests from Saskatchewan:

R. P. Allen and R. Smith in their search for the Whooping Crane (*Grus americana*) found Sandhill Cranes in 1947 as follows:

(1) Churchill Lake (T83, at about the intersection of R16 and R17). June 14, three cranes observed.

(2) Lac Ile a la Crosse, west side (T76,R13). June 10, two cranes.

(3) Niska Lake, mouth of McCusker River (T76,R18). June 10, two cranes.

(4) Ile a la Crosse Village, NW of Lac La Plonge (T74, R11). June 9, two cranes.

(5) Primrose Lake, 5 miles east (T68,R23). June 8, one crane.

(6) Aubichon Lake (T65,R13). June 9, a pair chased their plane and ran around beneath them with drooping wings.

Other Saskatchewan observations are:

(7) Lac Ile a la Crosse, just east of north end. Angus Buchanan (1920) found a nest with 2 eggs along the marshy shore of a nearby lake, May 30, 1914.

(8) Montreal Lake, north of north end (T63-64, R24-25W2). F. Mowat (1946) found breeding Sandhill Cranes in May, 1946.

(9) Dorintosh (T62,R18W3). C. F. Shirley (Godfrey, 1950) said cranes still summer here; no positive breeding evidence.

(10) Carlton to Cumberland (along Saskatchewan River). Summer; common, Richardson (Houston and Street, 1959).

(11) Emma Lake (T53R1W3). Observed at summer meeting S.N.H.S., June 13-15, 1958 (**Blue Jay**, 1958, 16:141).

(12) Snowden (T53,R19W2, Sect.10), just east of Jacquine Lake. I found two Sandhill Cranes here June 14, 1947. The birds ran around me as if with broken wings but I could not find the young which must have hidden in the tall grasses and sedges. The next day they were not there. On June 14, I also observed two cranes in T53,R18, Sect.6 and heard two calling in Sect.2,R19, on June 16.

(13) Campbell Lake (T51,R16W2). M. Street (1946) observed adults with young in August, 1943. F. Bard (letter, 1947) observed two cranes on two occasions in late June, 1945. M. Street, D. A. Munro, W. A. Tholen and I observed a lone crane and heard another June 5, 1947. Sandhill Cranes apparently nest here most years. (Houston and Street, 1959).

(14) Niska Lake (T51,R1W2). F. Bard observed two pairs June 10 and one pair June 11, 1939. The pair on June 11 remained close all day as though they had young nearby.

(15) Mountain Cabin at Carrot River (T53,R1W2). F. Bard (letter, 1947) heard cranes calling May 26 and May 30, 1939.

(16) Cochin, 24 miles NW, La Motts Muskeg (T48,R16W3). F. Bard (letter, 1947), observed two cranes May 21, 1935. One bird did not move for over an hour. When flushed they flew only a short distance then returned to the same area. Another crane was seen June 10, 1935.

(17) Waterhen Marsh, near Kinistino (T45,R21W2). R. T. Congdon observed cranes here during the 1902 summer; there were none here in 1955 (S. and M. Houston, 1955).

(18) Carlton, Saskatchewan Plains (T43-44,R4W3). Specimen taken May 3, 1858, and an egg collected by Thos. Blackiston (1862). Concerning the specimen taken he wrote (1863), measured; wings 19 to 21 in.; bill, along ridge, 5 in. (definitely G.c. *tabida*). One observed near in a large marsh July 27, 1939, by Mowat (Houston and Street, *loc.cit.*).

(19) Big Quill Lake (T33-34,R17-18W2). J. F. Ferry (1910), giving Barnes as the finder, listed a nest found June 20, 1909, with one broken egg. There is a male specimen (Royal Ont.Mus.Zool.) taken June 25, 1915, and another male taken south of here June 8, 1884.

(20) Dafoe (T32,R18W2). H. H. Mitchell (notes from Sask.Prov. Mus.), observed one pair June 21, 1915; another pair June 23, 1915, and a male and female and one young June 24, 1915.

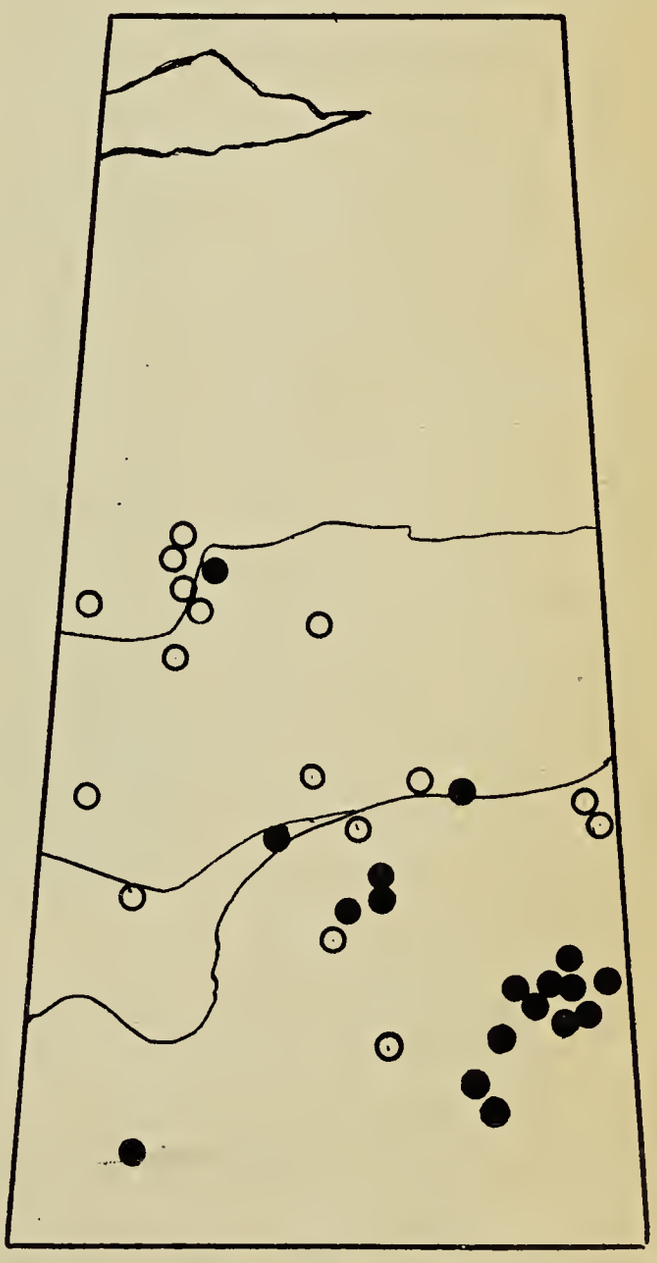
(21) Kutawagan Lake (T30,R24W2). H. H. Mitchell (Sask.Prov.Mus. Notes), observed cranes June 7, June 14, June 16, June 18, and June 20, 1917. P. A. Taverner (letter, 1942), found downy chick June 5, 1920 (Nat.Mus. Canada) and there are two specimens in the National Museum of Canada taken here: male (15438) June 5, 1920, and female (15544) June 14, 1920.

(22) Last Mountain Lake area (T28N). There are many records listed by Fred Bard (Sask. Prov.Mus. notes) from the area of Last Mt. Lake: Govan, Valeport, Young, Craven, Imperial Beach, Keddleston, and Condie, where cranes are regularly observed during spring and fall. At Stalwart Marsh, R. Smith (verbal, 1947) observed a pair of cranes about May 25, 1947. W. Tholen and I observed a flock of 41 on May 27, 1947, just north of Last Mt. Lake (migrants?).

(23) Good Spirit Lake (T29,R5W2). J. Gunn (Houston, 1949) reported Sandhill Cranes plentiful all summer for about eight years after 1888 and found a nest about two miles south of the lake, about 1890.

(24) Willowbrook (T25,R6W2). R. P. Rooke (Houston, 1949), in a place called "The Ravine," about one mile west and three miles south of where the village of Willowbrook is today, found in June, 1893, 10 nests each with two eggs.

(25) Rousay Lakes (T25,R4W2). R. Rousay (Houston, 1949) reported cranes were regular and common breeders in the 1890's.



THE SANDHILL CRANE IN SASKATCHEWAN IN SUMMER

O—Sight Records

●—Breeding Records

(26) Crescent Marsh (T23,R3W2). Frank Baines' father shot two birds here in 1884 (Houston, 1949) definitely, from measurements, *G.c. tabida*. One spring day in the 1890's Fred Baines found three cranes' nests, each with two eggs, in Section 20 and several other nests including a set of two eggs, May 27, 1899 (Mus.Comp.Zool.). He also raised two cranes, brother and sister, which nested their third summer and hatched a little one which died when nine days old. Not common here now (Baines, 1956). C. H. Maddaford (Houston, letter) found a nest with one egg either 1910 or 1911.

(27) Rokeby Marsh (T23-24,R3W2). Mr. McInnes (Houston, 1949) found five nests between 1938 and 1940. F. G. Bard also observed a pair of cranes here, apparently nesting, in June, 1941. A nest with one egg was found May 5, 1954, by John Maddaford, who showed it to Dr. C. S. Houston (1955) May 10. The egg measured 93.5 x 60.5 mm. C. H. Maddaford found two nests with eggs in the Rokeby Marsh about 1918. The 1954 nest was in Sect.12,T24N.

(28) McNichol Slough (T23,R2W2, Sect.34). Frank Baines' son (Houston, 1949) found a nest with eggs which had been destroyed in 1942. His father had found nests here 50 years earlier. Near here Baines found a nest with eggs, July 1, in the 1890's (one mile east and two miles south of Yorkton).

(29) Calder (T24,R31W1). E. C. Major (Houston, 1949) came upon an adult crane with two small young on high ground five miles south and three miles west of Calder, about June 20, 1945.

(30) Grayson (T20,R5W2). Allen Palmer (Fred Bard notes) collected two eggs April 11, 1914 (Sask. Mus. Nat. Hist.). These eggs were stolen from the Museum case.

(31) Balgonie (T18,17W2). Bent (1927) listed this as a breeding area but gave no data.

(32) Tyvan (T12,R13W2). Sandhill Cranes' nests were found here about 1914 as reported to Dr. C. J. Houston (**Blue Jay**, 1946: 44).

(33) Near Fillmore (T11,R11W2). Gerald Clay (verbal) found a nest with two eggs during the spring of 1918 and in the spring of 1919 caught a young bird which he tried to raise but it later died.

(34) Instow (T9,R17W3). A set of two eggs was taken here June 4, 1901 (Chicago Mus.Nat.Hist.).

Thus actual nest records are not very common from Saskatchewan during the past 20 years. I find only four areas where the species has been found nesting: Campbell Lake, Rokeby Marsh, McNichol Slough and at Calder. However, cranes have been observed regularly in several other areas and judging from the behaviour of the birds they must have nested in several others. Probably in the northern and north central parts of the Province the species is still fairly common during the summer in favorable areas.

I have found four unquestionable records of breeding specimens from Saskatchewan. These birds are much smaller than breeding cranes from farther east and south in Wisconsin and Michigan but agree with some from North Dakota, Wyoming, Idaho and a few from Oregon as well as those from Alberta and Manitoba. Following are the measurements in millimeters of these birds:

Measurements (in mm.) of Sask. Breeding Specimens

Museum	Where Taken	Date	Sex	Ex. Cul.	Tarsus	Bare Tibia	Wing
ROMZ	S. Big Quill L.	June 9, 1884	M	121	239	96	488
ROMZ	Big Quill L.	June 25, 1915	M	127	236	96	495
NMC	Kutawagan L.	June 5, 1920	M	124	236	—	523
NMC	Kutawagan L.	June 14, 1920	F	114	216	—	467

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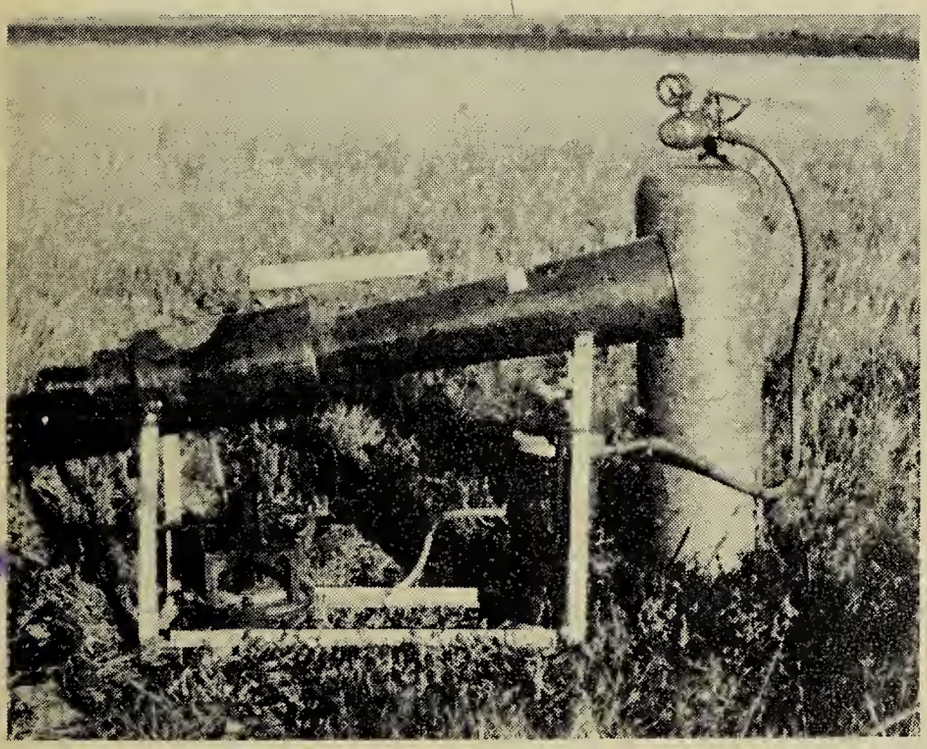
STREET, M. G.—1946. A list of the birds of Nipawin, Saskatchewan, mimeographed July, 1943 (Cont. #2—Y.N.H.S.) *Blue Jay,* 4:45.

The Use of Exploders in Protecting Crops Against Sandhill Crane Depredation

By **W. J. D. Stephen,** Canadian Wildlife Service, Saskatoon



Zon Acetylene Exploder
Oct. 5, 1959, Thackeray Lake, Sask.

In an article on Sandhill Cranes in the last issue of the **Blue Jay** (XVII: 141-2), T. A. Harper posed the provocative question: "How much are Sandhill Cranes worth to you?" To this question the agriculturist would give a negative answer because he is naturally inclined to regard the Sandhill Crane as a destructive bird, of nuisance value only. Some of the rest of us, who call ourselves naturalists, do realize the positive value of the Sandhill Crane and ask for its protection, but we do very little toward finding a solution to the problem of crop depredation which would help to reinstate the bird in the farmer's eyes. Many of the farmers of this country are naturalists themselves, whether they know it or not. They, too, would come to think of the Sandhill Crane as a valuable part of our wildlife legacy, if they could be protected from the damage it does to their crops.

There are several ways of giving Sandhill Cranes some positive value in the eyes of the agriculturist. For example, we might encourage people to look on them as valuable game birds by opening a hunting season and making it necessary to have a licence to kill them!

More conservatively, there are other practical measures that are worth investigating. Exploders and other such devices have been used to prevent duck depredations. Last October one of these exploders was used to prevent cranes from landing

in a field near Simpson, Sask. A farmer there who had seen exploders used successfully in experimental projects bought one of his own.

If the cost of the exploder is amortized over a period of five years, it costs only $13.00 per year. The cost of operation of one of these exploders using an acetylene generator is approximately 12 cents a day. Carbide, which is used to generate the acetylene, sells for about 12 cents a pound and the generator uses about a pound a day. These exploders can also be operated from acetylene bottles. The cost of adapting the exploder is approximately $30.00, which could also be amortized over five years. The cost of operating the exploders from bottled acetylene is 40 cents a day. That additional cost, however, provides a supply of acetylene from which the exploder will operate automatically for three weeks, with only sufficient attention to ensure that the machine is actually working. Machines using carbide generators must have the generators re-charged every 18 to 24 hours. Ordinarily there is more than 28 cents worth of value in time and gasoline in avoiding the necessity of re-charging the generator every day.

However, even if the use of acetylene exploders was widespread, we must recognize that cranes would still cost the farmer money either in actual crop losses or purchasing methods of control. The only way in which the farmer can come to accept the cranes is through relief from those burdens. It is important to us as naturalists to provide for such measures if we hope to maintain the status of the Sandhill Crane.

Combating an Outbreak of Botulism at Old Wives Lake (1959)

By **W. B. Hyshka,** Conservation Officer, Moose Jaw

I was first made aware of the outbreak of disease among the waterfowl at Old Wives Lake by a member of the Fish and Game League, and later by a member of the U.S.F. and W.S. banding crew—this was approximately July 28, 1959. On August 2, aided by members of the Moose Jaw Fish and Game League, South Sask. Wildlife, and the Bateman Branch of the South Sask. Wildlife, the entire shoreline from the bridge at Courval to Dunkirk was covered—all dead ducks were piled up and live sick ones released to fresh water. Meanwhile, H. Deighton had organized the Assiniboia and Gravelbourg Fish and Game Leagues and had covered the remaining half of the lake. It was estimated that 4000 dead ducks were picked up on the initial clean-up and about 300 live ducks released to new waters. On subsequent trips the ducks were burned, additional dead ducks picked up and sick ones again released to fresh water.

The dead ducks were approximately 50% Pintail, 25% Mallard, 10% Redhead and Canvasback, and the remaining 15% included Lesser Scaup, Gadwall and a few Ruddy and Blue-winged Teal. The sex-ratio was about 1:1.

On August 5, three Zon automatic exploders were received from Ducks Unlimited and set out on the east shore of Old Wives Lake. The east shore and the Isle of Bays appeared to be hardest hit by the outbreak. Prior to the setting out of the Zons, all ducks were removed from two miles of shoreline, and the Zons were placed along the one-mile stretch which seemed to be the hardest hit. The Zons were set out on points of land extending into the lake approximately one third of a mile apart. The area was checked 48 hours later and it was found that the unprotected area recorded 87 dead ducks and the Zon area only 14. The Zons were left out for 7 days with the total ducks being found in the unprotected area being nearly 200, while only 27 were found in the area protected by the Zons. The Zons were observed in action—ducks would settle in and feed until the Zons exploded, then immediately take off. The Zons were set to fire so there was little time lapse between each explosion. Shorebirds, gulls and terns rose when the gun

discharged but settled back to feed on the shore almost instantly—it appeared that the guns worked much better for ducks than shorebirds.

On August 10, a trip was made to the Isle of Bays with Dr. R. Connell, Dept. of Veterinary Science, University of Saskatchewan. We walked along the entire shoreline of the island and estimated roughly that 7000 birds had died. The disease (Dr. Connell was not sure whether ducks were dying from botulism or algae or a combination of both) was pretty well over by this date and less than 100 sick ducks were found.

The Zons were picked up on August 11 as the outbreak had subsided after some rain had fallen and the temperatures had dropped somewhat. Ducks Unlimited staff have since indicated that they would be in a position to supply 20 of more Zons for next season should another outbreak occur. It is felt that since any of their projects which raise 10,000 ducks is considered an "excellent" project, a project which would prevent a loss of 10,000 is in reality as good as an additional project, and perhaps less costly. The Department of Natural Resources has been asked to cooperate with Ducks Unlimited in reporting promptly any outbreaks and in interesting sportsmen's groups in looking after Zons if they are required. Various aspects of the problem will be discussed at the Fish and Game League convention at Fort Qu'Appelle, February 11-13.

Bird Houses Project at the Saskatchewan Training School

By **A. J. Beddie,** Superintendent, Sask. Training School, Moose Jaw

Manual Training Class at Sask. Training School

The boys in the manual training classroom at the Saskatchewan Training School have, for some time, been making bird boxes. Most of these boxes are of a comparatively simple design because interested purchasers wished this type.

The Moose Jaw Natural History Society has a spring project of placing bird boxes and feeding stations in the local parks and is encouraging citizens to do the same. The Society contacted the Training School to ask for boxes and stations to suit the needs of different species. It is hoped to make colony nests for martins, and suitable nests for swallows, wrens and bluebirds. The variety of sizes and designs adds considerable interest to the making, and stimulates an interest in the different birds. We hope to have boxes around the School which will be of value to the pupils in their nature studies.

Mr. Bard, Director of the Saskatchewan Museum of Natural History, visited the School last fall and expressed interest in the boys' work and very kindly offered to help dispose of their boxes at the Museum. We are most grateful for this offer since it adds purpose to the boys' work, and gives incentive to making a more finished product.

The bird nesting boxes will sell for $1.00 to $2.50 for simple basic types, with more elaborate houses proportionately priced. The price of the projected martin colony house will be around $20.00. Some feeders (self-feed) are available at $2.50 Shipping charges extra. Write **Dr. A. J. Beddie, Sask. Training School, Moose Jaw.**

Second Annual Report on the Prairie Nest Records Scheme

The accumulation of basic biological data in the form of "nest records" is fundamental to an understanding of the lives of birds. The annual breeding period, reproductive success, distribution of resident birds, correlation between breeding behaviour and climatic and environmental changes—these are some of the vital aspects of life history derived from nest records. In the two seasons of operation of the Nest Records Scheme more than 3000 nest record cards have been submitted. Within a few years there will be a great amount of information available for study. Already the files have proved useful as a guide to locating breeding birds. Dr. R. W. Storer, of the Univ. of Michigan, for example, who will be returning to Saskatchewan this summer to continue his studies of the comparative behaviour of grebes, will visit some of the colonies reported by our contributors. Breeding dates reported allow him to time his visits. It should be clear that every interested person has access to the information contained in these files. Direct inquiries to the Museum.

By the middle of January, 1960, forty-five contributors (for 1959) had returned 1696 cards. About 1410 nests were recorded for 107 species of birds; in addition 14 colonies of six species were reported.

SPECIES LIST: Common Loon (1); Red-necked Grebe (2); Horned Grebe (9); Eared Grebe (2 + colony 227 nests); Western Grebe (colony 16 nests); Pied-billed Grebe (2); Mallard (72); Gadwall (1); Pintail (11); Blue-winged Teal (1); American Widgeon (10); Shoveler (2); Redhead (1); Canvasback (4); Lesser Scaup (2); Common Goldeneye (1); Turkey Vulture (1); Sharp-shinned Sawk (6-; Cooper's Hawk (13); Red-tailed Hawk (41); Broad-winged Hawk (1); Swainson's Hawk (10); Ferruginous Hawk (7); Golden Eagle (4); Marsh Hawk (18); Prairie Falcon (14); Pigeon Hawk (11); Sparrow Hawk (5); Ruffed Grouse (3); Sharp-tailed Grouse (5); Sage Grouse (2); Gray Partridge (2); Sora (3); American Coot (9); Piping Plover (1); Killdeer (34); Spotted Sandpiper (2); Willet (2); Marbled Godwit (3); American Avocet (20); Wilson's Phalarope (3); Forster's Tern (3); Common Tern (3); Black Tern (7); Mourning Dove (49); Great Horned Owl (55); Burrowing Owl (6); Long-eared Owl (15); Short-eared Owl (3); Common Nighthawk (3); Yellow-shafted Flicker (21); Yellow-bellied Sapsucker (3); Hairy Woodpecker (2); Downy Woodpecker (4); Eastern Kingbird (36); Western Kingbird (6); Great Crested Flycatcher (1); Eastern Phoebe (18); Say's Phoebe (3); Traill's Flycatcher (1); Least Flycatcher (5); Western Wood Pewee (1); Horned Lark (51); Tree Swallow (18); Bank Swallow (3 + 5 colonies of 5 to 36 nests); Barn Swallow (53); Cliff Swallow (10 + 3 colonies of 50 to 570 nests); Purple Martin (3 + colony of 3 nests); Black-billed Magpie (63); Common Crow (67); Black-capped Chickadee (1); White-breasted Nuthatch (1); House Wren (34); Rock Wren (1); Catbird (19); Brown Thrasher (8); Robin (66); Swainson's Thrush (1); Veery (6); Mountain Bluebird (10); Sprague's Pipit (1); Cedar Waxwing (18); Loggerhead Shrike (11); Starling (32); Red-eyed Vireo (1); Warbling Vireo (9); Tennessee Warbler (1); Yellow Warbler (18); Ovenbird (1); American Redstart (1); House Sparrow (10); Bobolink (3); Western Meadowlark (17); Yellow-headed Blackbird (6 + 2 colonies); Redwinged Blackbird (117 + colony); Baltimore Oriole (7); Brewer's Blackbird (30); Common Grackle (16); Rose-breasted Grosbeak (1); American Goldfinch (5); Lark Bunting (1); Savannah Sparrow (8); Vesper Sparrow (18); Lark Sparrow (1); Chipping Sparrow (8); Clay-colored Sparrow (51); Song Sparrow (7); Chestnut-collared Longspur (10).

CONTRIBUTORS 1959 (especially noteworthy numbers of cards indicated): S. Alberts, W. Anaka (84), P. L. Beckie, J. B. Belcher, M. Belcher, J. Briggs, D. Buckle, J. D. Chandler, R. T. Cowell, J. Dew, E. G. Evans, G. Fletcher, G. Foster, E. L. Fox and R. Fox (75), G. A. Fox (129). R. Fyfe, D. Gilroy, J. Gunn, D. Hatch (131 from Man.), W. Horseman (155), A. J. Hruska, E. K. Hubbard, S. O. Jordheim, D. Karasiuk, R. Klimack, E. Kuyt, F. W. Lahrman, J. Lane. K. Leier, L. M. Lohr, H. S. McArton, R. W. Nero, R. O'Connor, R. Ostoforoff, Mr. and Mrs. K. D. Paton, Sask. Falconry Association

Photo by R. J. Fyfe

Three Sage Grouse chicks, Killdeer badlands June 28, 1959.

(97), S. Sealey (181), W. Shudzik, G. E. Smith, S. Waycheshen, F. A. Wilson, S. Zazelenchuk (65).

Note: Records are filed at the S.M.N.H. Members of the Museum staff have handled the 1959 cards and prepared this summary.—Ed.)

A few contributors included general remarks or a summary of the 1959 season. For example, W. Anaka of Spirit Lake, Sask., noted a "sharp decrease of all species requiring wet habitat—ducks, coots, rails, shorebirds, blackbirds, etc. Several species were absent altogether, and only 15-20% of the 1958 total of breeding pairs were present in 1959 Other species not directly affected by the dry conditions appeared to have a normal year. Increases were noted in the Red-tailed Hawk and the Bobolink although only one nest of the latter was located. The Black-billed Magpie had excellent fledgling success; the Common Crow showed marked increase of breeding pairs, but low success ratio." We urge others to submit this additional information whenever possible.

You are reminded that the P.N.R.S. is collecting information for the three prairie provinces and the Northwest Territories. Cards are being sent to all 1959 contributors; others who wish to record nest data should write for cards. Write to **Prairie Nest Records Scheme, c/o Saskatchewan Museum of Natural History, Regina, Sask.**

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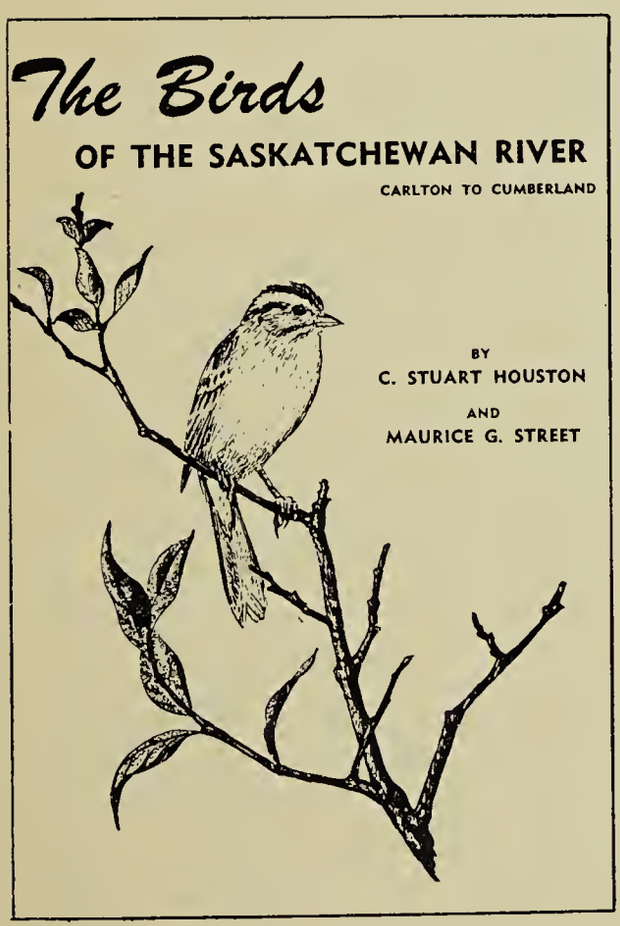

The Birds of the Saskatchewan River, Carlton to Cumberland (1959) is the second and most recent publication in the S.N.H.S.'s series reporting natural history studies being carried out by its members. The price of the 205-page bulletin on the birds of Central Sask. is $1.50.

—a splendid example of the type of contribution that amateurs can make to ornithology.—O. E. Devitt in the F.O.N. **Bulletin.**

—what a pleasure to take up **The Birds of the Saskatchewan River** and find it to be not only an accurate check list, but a thoroughly fascinating historical account.—R. W. Sutton in **The Beaver.**

—Dr. Houston's account of the history of previous work on the birds of the Saskatchewan River area is outstanding.—J. L. Baillie in **Canadian Audubon.**

—the authors are to be highly commended for their initiative and thoroughness in producing this scholarly work which doubtless will retain its usefulness for a long time to come.—W. E. Godfrey in **The Blue Jay.**

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Margaret Belcher, Secretary, Regina College, Regina.

Birds and the October Blizzards in Manitoba

by **David Hatch,** Oak Lake, Manitoba

Having read Frank Brazier's article on the "Big Snow of October" in the December issue of the **Blue Jay** (XVII:154-5) I decided to describe the effects of the blizzards in this part of Manitoba.

At 1:00 a.m. on October 7, it started to snow at Oak Lake. This was the beginning of three storms caused by a chain of low pressure areas moving into the prairies from the Pacific Ocean. A total of 31.5 inches of snow fell in three separate snowfalls before the blizzards ended on October 12. A wind which varied between ten and forty miles per hour heaped the snow into eight-foot drifts. Between October 7 and 12 the temperature ranged between about 20 degrees and 33 degrees Fahrenheit. A good deal of the snow melted, but never enough for us to see the stubble.

At the time of the blizzards, the great majority of the trees were still clothed in their fall robes of golden and brown leaves. The moisture content of the snow was very high and, as a result, branches six inches thick were broken under the strain and crashed to the ground. Miles and miles of fences sagged, and in many cases wires broke and staples pulled from the posts.

It was impossible for hawks to find rodents in the snow-covered fields so they were forced to migrate from this area or to change their diet. Between 11:55 a.m. and 12:27 a.m. on October 8, I saw seventeen buteos flying southeast between 75 and 200 yards high. Later the same day I observed a Red-tailed Hawk eating a small bird not more than forty yards from our house. On October 9, I saw an adult male Marsh Hawk, a Cooper, a Sharp-shinned, and a Sparrow Hawk. Four more buteos were seen on October 11. These were the last I saw until a warm change in the weather, beginning on October 18, sent in a fresh movement.

About six Myrtle Warblers were seen every day of the storm, with the last one seen on October 17. One Orange-crowned Warbler was seen on October 12. On October 9, the last Palm Warbler was seen fluttering from one window to another in an attempt to get into the house.

Millet was scattered in the shelter of a granary and under our kitchen window. To these weed seeds a Mourning Dove was attracted on both October 11 and October 12. On October 10 as many as sixty Slate-colored Juncos fed on the millet. Whenever a large bird such as a Rusty Blackbird came to feed, the Juncos gave ground.

Of all the species, Western Meadowlarks were the hardest hit in my opinion. On October 8, there were fifteen meadowlarks feeding on the seeds put out for them and by October 17, there were only seven. Three were found dead around the farm buildings and another seven were caught which were too weak to fly. Three of these birds had frozen their legs from sitting in the snow. When chased, they would fly and run over the snow until they were exhausted; then one could catch them. We put them in a granary and opened a window for them to fly in and out if they wanted. To my knowledge one of the birds we put in the granary died. Two that were in a precarious state were brought into the house, where one, after loving care, survived.

I found a Lincoln's Sparrow and two Myrtle Warblers dead. The snow melted enough in our yard for me to find three dead Eared Grebes. They were probably forced to land by the wet snow on the back and wings and of course could not leave the ground.

With the coming of the first blizzard the ducks vacated the Oak Lake marshes and moved south. On the afternoon of October 9, I walked around two of our biggest marshes and to my surprise there were only about three hundred ducks huddled in a few open holes in the ice. I was able to get within 15 yards of 200 graceful Whistling Swans sitting around the edge and in an open hole in the ice. They were apparently waiting for a break in the weather so that they could continue their southern flight.

Besides the juncos that fed on mil-

let under our kitchen window, a Clay-colored, a Harris', and two Tree Sparrows were daily visitors. What a wonderful chance to observe birds at close range!

A mild spell in the latter part of October sent about 300 ducks through here on October 24. Also, on October 24, I saw a Greater Yellowlegs. On October 21, there was an exhausted Common Snipe wandering among the cattle in our barnyard. How these birds survived the blizzards is a deep mystery to me. Many, of course, did not survive, and it would have been impossible to estimate the number of birds killed by the blizzard in the Oak Lake marshes alone.

Saskatchewan Birds in August, 1959

As Noted by **J. Murray Speirs** and **Doris H. Speirs**, Pickering, Ont.

August 19 was a cool, overcast day with frequent thundershowers and a chill wind from the northeast. In the morning we drove east along Manitoba's Highway 19 for nine miles to the spot where we had seen a pair of Northern Three-toed Woodpeckers the night before, where Olive-sided Flycatchers called and a Lincoln's Sparrow sang. In the morning drizzle we did not venture from the car: a big bull moose stared at us from the shadows under the evergreens and a group of Boreal Chickadees uttered their nasal version of the Black-capped Chickadee's call. We left our boreal friends and drove south through Brandon, then west through Virden, reaching the Saskatchewan border at 5.20 p.m. We had hoped to spend the night at Moose Mountain but were advised against trying the road down in the pouring rain. There was a brief flash of sun just before sunset and a Clay-colored Sparrow sang as we turned in at Moosomin.

Next morning, August 20, we drove in to Regina, passing a flock of about 80 Black-billed Magpies between Whitewood and Grenfell and stopping to admire a beautiful pair of Krider's Red-tailed Hawks between Indian Head and Regina. One had a white head and tail and big white wing patches; the other was similar but with a tinge of red on the terminal third of its tail. The call was not so guttural as that of our eastern red-tails. We had our first view of the beautiful new museum in Regina and had lunch with our friends Robert Nero and the Hamerstroms (also arrived early for the A.O.U., from Wisconsin). We decided to head for the Cypress Hills and turned in early again on another stormy night at Moose Jaw.

Aug. 21 was a seraphic day and we set forth from Moose Jaw in high anticipation. Before we reached Mortlach we stopped to admire a lovely patch of roadside sage, fresh washed by several days of rain, when out burst a flock of six Sharp-tailed Grouse, our first on this western trip. We had hardly started up when a family of Gray Partridge was spotted on the far side of the road. Near the salty Lake Chaplin we saw our first Willet for Saskatchewan and 35 Avocets (as Dr. Nero had predicted). The highlight of the morning was Reed Lake. It was full of ducks of at least nine species including a Gadwall with four young. Its shores were lined with Franklin's and Ring-billed Gulls with a good sprinkling of shorebirds including 2 Wilson's Phalaropes. We stopped to investigate a road kill and found that it was a Short-eared Owl. Another road kill proved to be a porcupine: what do porcupines live on out in the open prairies far from any trees? We arrived at Cypress Hills in mid-afternoon, only to find the available accommodation solidly booked. As it was early we decided to look around, having left our name in case a vacancy should turn up. Black-capped Chickadees were omnipresent as were the rather pale Oregon Juncos and Audubon's Warblers. Red Crossbills flew over, calling "yip, yip" from time to time. In late afternoon a cabin became available and we moved in, lit a fire and opened windows as the cabin appeared to have a striped tenant below the floor. This joint tenancy became more and more dif-

ficult as time progressed and we were relieved when another cabin became available and we were able to move there before nightfall.

As we walked around the little lake in the evening we found a Solitary Sandpiper patrolling its shore, and the singing of a Ruby-crowned Kinglet and the flight song of MacGillivray's Warbler added to the beauty of the place. We did not see the kinglet that evening, but the next day we saw at least four, including an adult feeding young. My recollection is that there may have been more than four but the birds were very high up in the tall evergreens. The begging calls of the young were unfamiliar to me and the birds were too high to identify properly that day, but on the morning of August 24 I was able to get a satisfactory view of two of the birds and they were definitely Ruby-crowned, not Golden-crowned Kinglets. We did not find any Golden-crowned Kinglets in the park during our visit.

We explored the park all the next day, finding four more Sharp-tailed Grouse and hearing a Lincoln's Sparrow singing near headquarters. The Lincoln's Sparrow was singing from the scrub willows that occupy the "lake bed" and since this is the species we are writing up for Bent we spent some time observing at this spot. On the morning of August 24 before we left the park an adult was seen feeding a young bird there.

The highlight of the 23rd was a visit to Cypress Lake where we saw some 200 Eared Grebes including one very conspicuous albino. There were 10 kinds of ducks including about 80 Ruddy Ducks. A single Avocet accompanied many other shorebirds of nine species on the shores. Out with the ducks a Wilson's Phalarope and 57 Northern Phalaropes rode the waves. Over the lake were five Forster's Terns and 25 Black Terns. On the way from the park we saw a Say's Phoebe, two Loggerhead Shrikes and photographed a Swainson's Hawk just as it took off from a roadside pole. Back at the park we were glad to see an Orange-crowned Warbler and five more Red Crossbills.

On the morning of the 24th we saw a Pine Siskin and two Purple Finches and a great movement of Robins before leaving to return to Regina. At Crane Lake we estimated 6000 Franklin's Gulls. Our only Prairie Falcon of the trip was seen near this spot too.

Between Swift Current and Herbert we stopped to see what we could find in a roadside shelter belt. A possible Lark Sparrow had dashed in. Quite a strong northwest wind was blowing. On the lee side we found about a dozen Eastern Kingbirds and two Western Kingbirds (our first of the trip). Another smaller Flycatcher (probably a Least), a Yellow Warbler and 5 Clay-colored Sparrows (but, alas, no Lark Sparrow). Reed Lake was again full of waterfowl including an estimated 700 Canvasbacks but only one Redhead that we could find. We made a detour up to Riverhurst from Uren seeing many Mallards, Pintails and Blue-winged Teal in little potholes en route. The Western Meadowlarks and Brewer's Blackbirds were of interest to eastern eyes. From August 25 to 29 we attended the sessions of the A.O.U. at Regina.

The highlights of the early morning field trip just south of Regina on August 26 were, of course, the Burrowing Owls and the roadside pond with Dowitchers and Marbled Godwits. We were also glad to see the Chestnut-collared Longspur and Richardson's Ground Squirrel. Margaret Belcher took a party of us to look for Baird's Sparrows on the afternoon of August 27. We found no Baird's but did see two Western Kingbirds, two Black-billed Magpies, several Loggerhead Shrikes and a lovely Red Fox. A Western Meadowlark uttered a dry rattle, very like a longspur's call, a new note to me. That evening I followed the local Robins to their roost site just south of Parliament Buildings where I found about 200 with as many Crows and about 100 Common Grackles in lively conversation before retiring for the night. On August 28, we visited Rock Wrens at their own private castle (3 slabs of concrete) by Wascana Lake and went searching for Baird's Sparrows again with Roger Tory Peterson, Dr. A. E. Allin and George W. North, again with no success.

The "official" field trip on the 29th was the big event of our stay in Saskatchewan, with its White Pelicans, Western Grebes, thousands of Sandhill Cranes, Sprague's Pipit

(courtesy of Roger Tory Peterson), and Chestnut-collared Longspurs. On the final field trip, to the Qu'Appelle Valley with Dr. Stuart Houston on August 30, we saw more species than we did on the big field trip the previous day with such species as Catbird, Veery, Red-eyed Vireo and American Redstart as well as more western birds, like Western Grebes, White Pelicans and Harlan's Hawk. We spent the night of the 30th at Moose Mountain having missed out on this visit when we first arrived in Saskatchewan. Here we saw a Common Loon, five Bonaparte Gulls, a Yellow-bellied Sapsucker, a Least Flycatcher and two Myrtle Warblers, as well as another Pine Siskin. On August 31 we started home for Ontario, going south from Moose Mountain to Carlyle, then east to Souris, Manitoba. We saw a Pied-billed Grebe before we reached Carlyle, a very productive shorebird puddle near Wauchope, with two Baird's Sandpipers and three Stilt Sandpipers with many Pectorals, Leasts and Semi-palmateds. We had hoped to see Mountain Bluebirds in Saskatchewan but missed them until just over the border en route to Souris, when we had a fine view of two by the roadside.

Our previous visit to Saskatchewan was from July 13 to 16, 1953. A summary of our observations during that visit was published in the **Blue Jay** (XI: 25, Oct.-Dec., 1953). For comparison a summary of this year's observations may be of interest.

SPECIES LIST: Common Loon (3); Eared Grebe (202); Western Grebe (25); Pied-billed Grebe (6); White Pelican (30); Double-crested Cormorant (4); Great Blue Heron (7); American Bittern (1); Mute Swan (15); Whistling Swan (4); Canada Goose (34); Mallard (1417); Gadwall (39); Pintail (83); Green-winged Teal (40); Blue-winged Teal (746); American Widgeon (140); Shoveler (488); Redhead (22); Ring-necked Duck (3); Canvasback (832); Lesser Scaup (10); Common Goldeneye (5); Ruddy Duck (81); Hooded Merganser (5); Sharp-shinned Hawk (possibly Cooper's—poor view) (1); Red-tailed Hawk (20); Harlan's Hawk (2); Swainson's Hawk (34); Marsh Hawk (58); Prairie Falcon (1); Sparrow Hawk (16); Sharp-tailed Grouse (17); Gray Partridge (10); Sandhill Crane (4000); Soral (1); American Coot (337); Semi-palmated Plover (2); Killdeer (43); Black-bellied Plover (3); Upland Plover (1); Spotted Sandpiper (5); Solitary Sandpiper (5); Willet (6); Greater Yellowlegs (31); Lesser Yellowlegs (60); Pectoral Sandpiper (106); Baird's Sandpiper (32); Least Sandpiper (60); Long-billed Dowitcher (612); Stilt Sandpiper (3); Semipalmated Sandpiper (158); Marbled Godwit (13); Sanderling (60); American Avocet (38); Wilson's Phalarope (27); Northern Phalarope (57); Herring Gull (31); Ring-billed Gull (823); Franklin's Gull (9221); Bonaparte's Gull(8); Forster's Tern (5); Common Tern (19); Black Tern (44); Mourning Dove (90); Burrowing Owl (11); Short-eared Owl (1 dead); Common Nighthawk (20); Ruby-throated Hummingbird (2); Belted Kingfisher (11); Yellow-shafted Flicker (10); Yellow-bellied Sapsucker (1); Hairy Woodpecker (3); Downy Woodpecker (4); Eastern Kingbird (199); Western Kingbird (6); Say's Phoebe (2); Least Flycatcher (7); Western Wood Pewee (1); Horned Lark (23); Tree Swallow (3); Bank Swallow (127); Rough-winged Swallow (1, good view with telescope); Barn Swallow (426); Cliff Swallow (7); Purple Martin (24); Black-billed Magpie (118); Common Crow (4329); Black-capped Chickadee (42); Red-breasted Nuthatch (12); House Wren (19); Rock Wren (3); Catbird (3); Robin (291); Veery (1); Ruby-crowned Kinglet (10); Sprague's Pipit (1); Cedar Waxwing (21); Loggerhead Shrike (18); Starling (174); Red-eyed Vireo (3); Black-and-White Warbler (1); Tennessee Warbler (1); Orange-crowned Warbler (5); Nashville Warbler (1); Yellow Warbler (19); Myrtle Warbler (3); Audubon's Warbler (36); Northern Waterthrush (3); MacGillivray's Warbler (3); Yellowthroat (17); Wilson's Warbler (1); American Redstart (4); House Sparrow (660); Bobolink (1); Western Meadowlark (106); Yellow-headed Blackbird (78); Redwinged Blackbird (590); Brewer's Blackbird (430); Common Grackle (191); Brown-headed Cowbird (8); Rose-breasted Crosbeak (possibly Black-headed; just heard) (1); Purple Finch (3); Pine Siskin (5); American Goldfinch (44); Red Crossbill (15); Lark Bunting (2); Savannah Sparrow (46); Vesper Sparrow (20); Lark (?) Sparrow—poor view (1); Oregon Junco (149); Chipping Sparrow (44); Clay-colored Sparrow (33); Lincoln's Sparrow (3); Song Sparrow (7); Chestnut-collared Longspur (12).

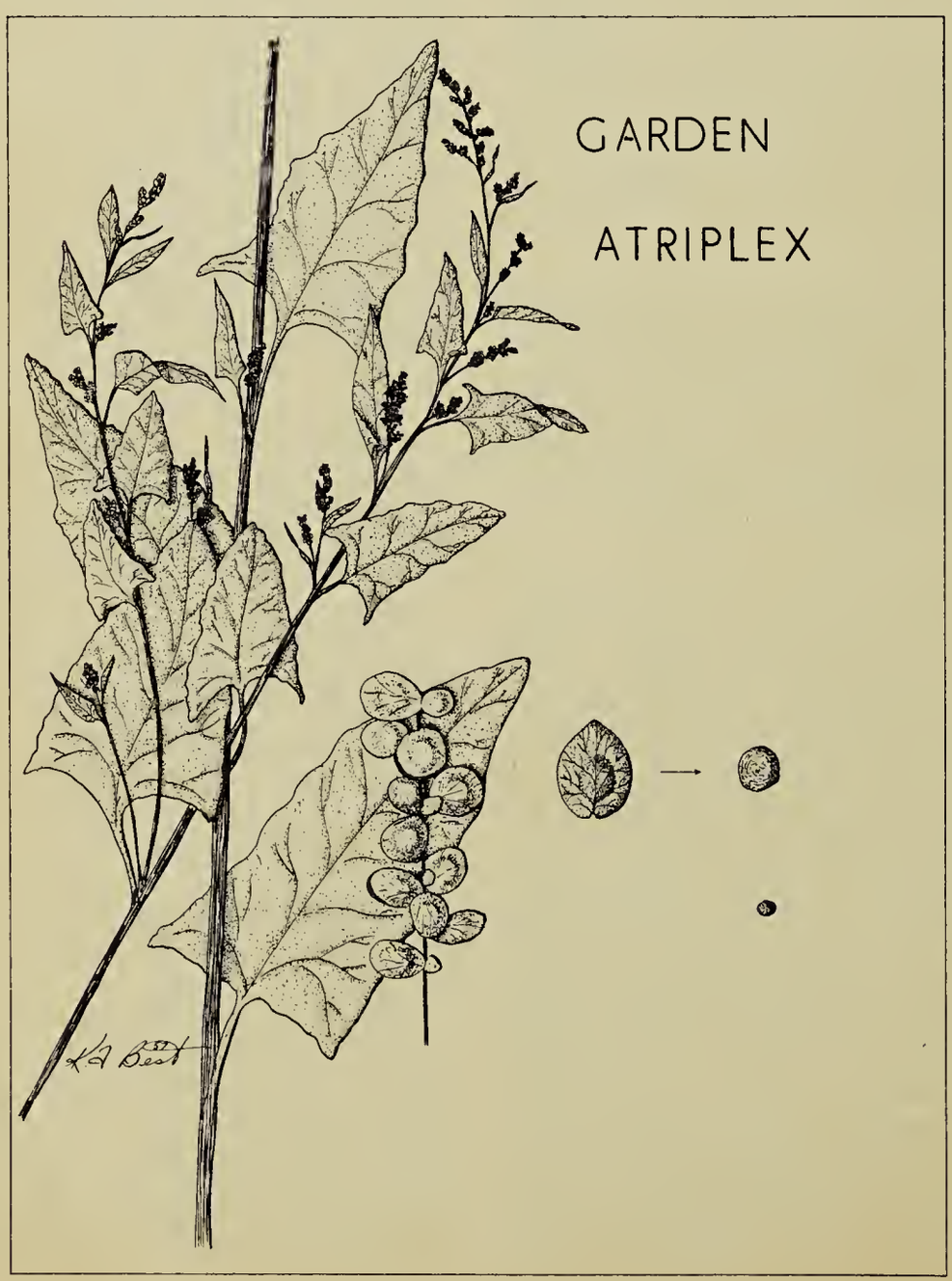
From July 13-16, 1953, we saw 86 species in Saskatchewan, 12 of which were not seen during our 1959 visit in August: Red-necked Grebe, Horned Grebe, Ring-necked Pheasant, Common Snipe, Eastern Phoebe, Long-billed Marsh Wren, Brown Thrasher, Mountain Bluebird, Warbling Vireo, Baltimore Oriole, Baird's Sparrow and Le Conte's Sparrow. In 1959 we saw 136 species during our stay in Saskatchewan of which 62 were not seen during our 1953 visit; 74 species are common to the two lists. Far more individual birds were seen during our 1959 trip than in 1953: the totals for three species in 1959—(Franklin's Gull, Common Crow and Sandhill Crane)—far exceeded the grand total of 2708 for all species in 1953.

Plant Insurance

By **Keith Best** and **Archie Budd**—Swift Current

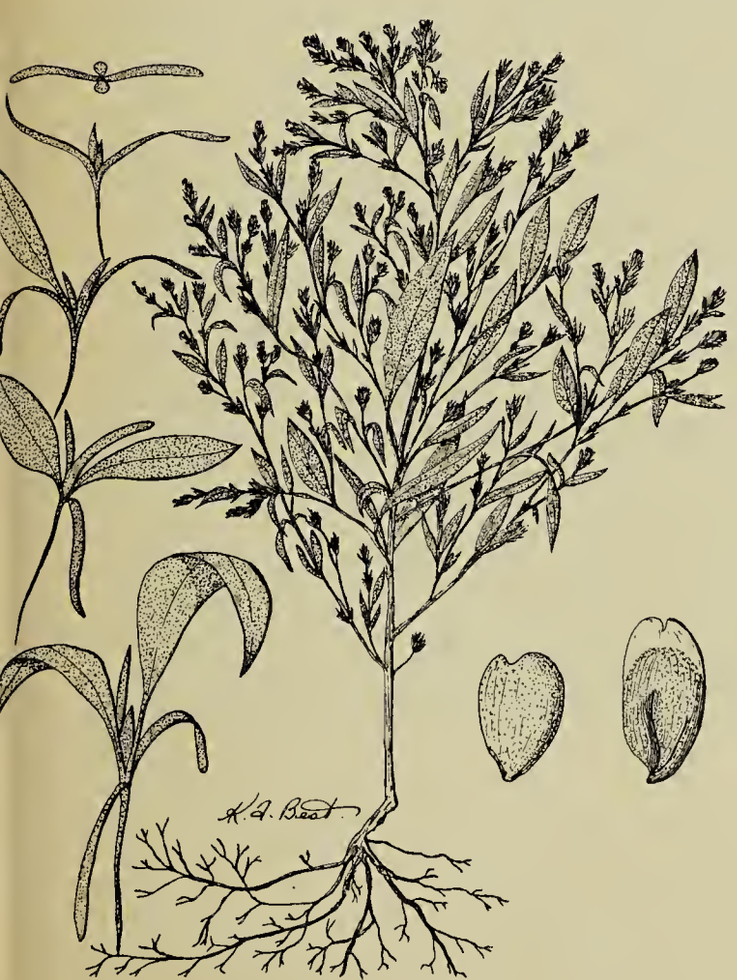
Many of the weedy plants appear to possess an almost uncanny faculty for self preservation. "How is it," many folk ask, "that after a season of good clean fallow, the crop contains many newly germinating weeds, even after a good germination of weeds during the fallow year?" Some plants bear two kinds of seed on the same plant, one kind germinating during the first growing season, the other kind having a long-delayed germination period. In at least four species the two kinds can be determined by observation. These are Garden Atriplex, Orache, Russian Pigweed and Cocklebur. The first three belong to the Goosefoot family and the fourth is allied to the Ragweeds.

Garden Atriplex or Copper Orache (*Atriplex hortensis*) is a garden plant which is becoming an annoying weed around urban areas. The ornamental strain has reddish leaves but after self seeding it reverts to its original green-leaved strain. This plant bears large panicles of fruit, looking very like stinkweed with a tall, three to four foot stem and broad leaves. Close inspection will show that on the same plant are two quite different kinds of seed, the most abundant being large, pale brown, flat about 1/8 inch in diameter and enclosed in a pair of pale brown bracts. The other kind are small, black and shiny, about 1/12 inch across and not enclosed in bracts. The large, bracted kind will germinate after sowing in spring in a very few days, but the bractless, black seeds will not germinate until at least the following spring and sometimes even later.



Russian Pigweed (*Axyris amaranthoides*) is a common weed of gardens and shelter belts and produces copious quantities of seed. These also are of two different kinds in the same inflorescence. One kind bear the two-lobed membranous ears at the wider end and seem to be somewhat blotched and long oval in shape. The other kind are almost round, silvery in colour and bear no membranous ears. The eared variety germinate very early in spring but the other, non-eared kind, delay germination at least one season, perhaps more.

In Orache (*Atriplex patula*) a similar variation of seed occurs, but in this case one kind is larger than the other, the larger having the early germination and the smaller the delayed.



RUSSIAN PIGWEED

COCKLEBUR

Cocklebur (*Xanthium spp.*) bears prickly burs each containing two long, narrow black seeds, one considerably larger than the other. Studies made at Swift Current show that the larger seed will grow the first season after seeding but that the smaller one delays its germination at least one season.

It is quite possible, in fact probable, that many plants similarly bear two kinds of seeds and act in the same manner regarding their delayed germination. More studies along this line may bring to light some interesting facts and help suggest means to combat some of our nuisance plants.

Is Our Land Being Abused?

By **Stephanie Stewart,** Moose Jaw

It is surprising how one thing leads to another, and a line of thought may take one into unexpected places. Dr. Ledingham's talk on "The Grasslands Tour" at the Moose Jaw Natural History Society meeting on January 8 was a straightforward illustrated talk on the tour of Western Canadian grasslands conducted in connection with the International Botanical Congress last summer. It was given by a professional botanist for a group of people avowedly interested in natural history and the outdoors, but for one listener it raised a number of questions.

To whom do the grasslands belong? Is there any planned range management in Western Canada in order to control grassland use? How does management of the grasslands compare with the control of other natural resources in Canada? What are "natural resources" after all?

Surely one of these so-called "natural resources," and only one, is basic—the land, for all others derive from it . . . minerals beneath the land; waters flowing from the land; fish living in the water; plants growing on the land; birds and animals living among and on what grows there.

There is legislation controlling the use of our forests. There are laws limiting the hunting of wild game, and the taking of fish, laws pertaining to mining—all designed to conserve these resources so that they may not be depleted but perpetuated.

But what of the land itself? Of what avail bag limits and hunting seasons on duck and deer, if the habitat of the duck and deer are to vanish. To what purpose do the federal and provincial governments spend hundreds of thousands of dollars yearly to study and develop new and better farming practices if it is left to the conscience of the individual to protect and preserve the land. Anyone may buy a car, but society has placed definite limits on the manner in which it may be operated —where, how and by whom. Have similar restrictions been placed on those who own the land?

Farming is a business—and a risky and uncertain one. Farmers, like business men in other fields, need to make a profit in order to stay in business; good farmers, like good business men in other fields, study constantly to improve their methods, to make the best use of their "plant." Sometimes the business man finds that his plant is not adequate to do the job desired of it and without remodelling or expansion, or a realigning of system, it cannot be operated profitably. Sometimes the land simply is not fit to produce the crop —grain, grass or animal—demanded. But who decides? Must the land be impoverished, worn out, leached and drifting before it is admitted that it is being abused? No one wishes to raise the grim spectre of the "thirties" but can that ghost ever be laid while sub-marginal land is put to the plough and natural grassland persistently over-grazed in order to operate at a profit however small, and while programmes of replenishment and reclamation that could be implemented are ignored for lack of money, failure to recognize their importance, or sheer indifference.

Yet the results are clear enough. The far-seeing, thinking farmer does make a profit, does enjoy a good living and often inherits a farmstead that is the showplace of his district. But here, as in so many matters, the far-sighted, far-thinking are few: the complacent and indifferent are many. Are the few enough to leaven the dough?

Egypt and North Africa were the granaries of the Greek and Roman worlds—what do they produce today? Palestine was once a "land flowing with milk and honey," yet today a large part of the endeavour of the Republic of Israel is bent toward reclaiming a desert. Twin rivers watered a land that made the name of Babylon synonymous with plenty —as long as the soil endured. But the soil did not endure—and neither did the civilization it nurtured. Will this happen here?

Photo by W. C. McCalla.

Penstemon fruticosa (Pursh) Greene subspecies *scouleri* (Lindl.) Penn. & Keck.

The last issue of the *Blue Jay* showed Dr. McCalla's picture of *Penstemon nitidus* Dougl. which is common on dry banks in southern Saskatchewan. The Shrubby Penstemon shown above does not occur on the prairies but it is present, though rather rare, in southwestern Alberta (E. H. Moss, *Flora of Alberta*, 1959).

The Shrubby Penstemon has stems 8 to 15 inches high. It is somewhat woody at the base. The flowers are a beautiful lilac-purple colour. Dr. McCalla says that, like *Penstemon nitidus*, plants moved to his Calgary garden have done very well in full sunshine.

BOYS' AND GIRLS' SECTION

Edited by **Joyce Dew,** Saskatchewan Museum of Natural History

NEWS FOR THE BOYS AND GIRLS

We are trying something new in this issue of the **Blue Jay**—a bird contest. Some of the birds are easy to identify, others you will have to identify by the clues given. Let us know how you like the idea of this contest and if you would like to see more contests of this sort. You will also notice that the insects, birds, etc., on the top of this page are different from last issue's. If any of you want to try drawing birds and insects like these, we may be able to use them for the next issue.

We hope that you will have more nature observations to send us now that spring is here. From now on we shall print the name and address of everyone sending in observations, as well as printing as many of the letters as we have space for. We are also interested in hearing about nature activities your school or club is carrying out. Such reports will encourage other groups to start activities.

We would very much like to have you visit the Museum. If your teacher brings your class for a lecture tour tell your museum guide that you are a reader of the **Blue Jay.** We want to meet you in person and of course encourage you to send in contributions!

CONTEST RULES

Any young person may submit material for this section of the **Blue Jay.** The entries must be first-hand observations in the form of letters, stories, poems, black - and - white sketches or photographs. Letters should not exceed 500 words. All entries must be accompanied by the name, age, and address of the sender.

Book prizes or magazine subscriptions will be awarded with each issue of the **Blue Jay.** Special prizes will be given from time to time to teachers who encourage their pupils to write or who sponsor nature activities about which the children write.

Send in your nature observations to Boys' and Girls' Section, **Blue Jay,** Miss Joyce Dew, Saskatchewan Museum of Natural History, Regina. The closing date for the next issue is April 15, 1960.

PRIZE WINNERS

The prize this issue goes to Bryan Lyster of Abernethy for his story on "A Summer Pet." Congratulations, Bryan, we hope to be hearing from you again.

A SUMMER PET

by **Bryan Lyster,** age 11, Abernethy

On a cold, rainy day in July when I was feeding my flock of tame ducks I noticed a strange duck amongst them. As soon as he saw me, he flew to the other end of the dam. I crept along behind bushes and trees to get a better look at him. I found that he was a young Canvasback. I decided it would be fun to try and tame him.

I put the feed out and hid myself behind the barn which is quite close to the dam. As soon as I was out of sight he came up to feed with the others. I did this for about five days and on the sixth day he didn't fly away but swam around in circles about 20 feet from the shore. Each day he started to come closer to the shore when I fed them. Soon he would come up to eat with the others, when I was in plain sight. It was not long until he would come to my duck call every time.

He stayed all summer but in late autumn he heeded the call of the other ducks to go south. I miss our visitor very much and hope he will return in the spring.

A MOURNING DOVE'S NEST

by **Darlene Svinger,** age 12, Mankota

This summer, while spending a week of holidays at my grandmother's, I had the chance to see a Mourning Dove's nest. Every day I passed the tree to go to the garden. I didn't notice the nest till the day before I went home, when a flutter of wings gave the secret away.

The nest was on the branch of a poplar tree, about six feet from the ground. It was a small, round, flat platform built of long grass and small twigs. In the nest, there were two chalky white eggs. Strange as it may seem, my grandmother said she had never seen the nest. In the evening, as the darkness was falling, the Mourning Dove would sit on the eggs, and give her sad call.

THE DEER

by **Mildred Boon,** age 12, Maryfield

One morning as I was riding to school on the bus, one of the boys said, "Look at the jumper!" All eyes were soon fastened on an enormous buck, with a most magnificent set of antlers on its head. The bus driver honked the horn. At once the splenid beast was alert. With a bound he went along on the other side of the fence. Up went his big white tail, warning others of danger. As his speed increased, the long, trim, slender legs swiftly covered the ground. Again the horn blasted. The buck's tail went down. With huge leaps it galloped on. Watching the speedometer we saw the deer was going thirty miles an hour. Over a pile of brush, through a fence, the buck flew, without a second of hesitation.

Just in time we noticed we were arriving at the corner. The bus made it around the corner, while the deer continued his race to safety.

That morning I saw a sight I will never forget. At close range I observed one of the most graceful animals of the Canadian Plains.

NEWS FROM JUNIOR MEMBERS

Several junior members sent in drawings recently. Colleen Schab and Verna Horaska of Calder, Saskatchewan, drew Great Blue Herons. Both drawings showed the long legs of the bird and its long stout bill. Have any of you seen a heronry where these birds build their nests?

Darlene Svinger drew the Mourning Dove's nest which she tells about in her letter. Any junior members who want to keep a record of their nest observations should write in to their junior editor for further information.

Ernest Sauve of Fort-a-la-Corne drew two robins in a tree, and Ronnie Kirkham tells about three baby rabbits which his dad found in a field. They refused to eat so they were taken back to the field.

We are always pleased to get letters, drawings and photographs from junior members, so let us hear from you.

Name the Bird Contest

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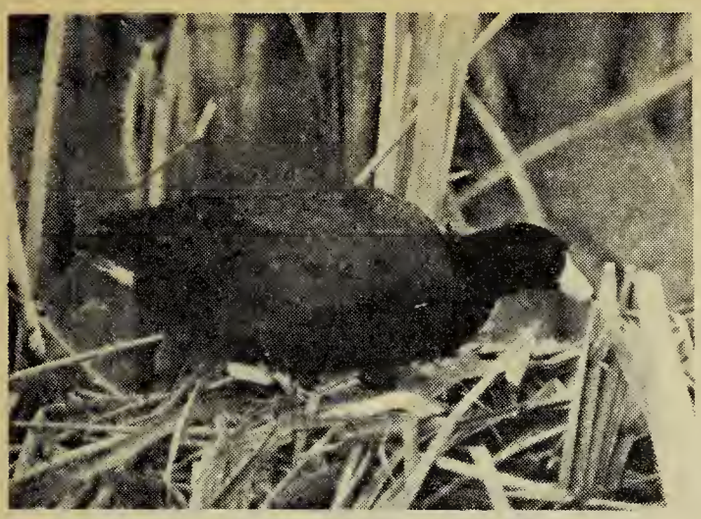

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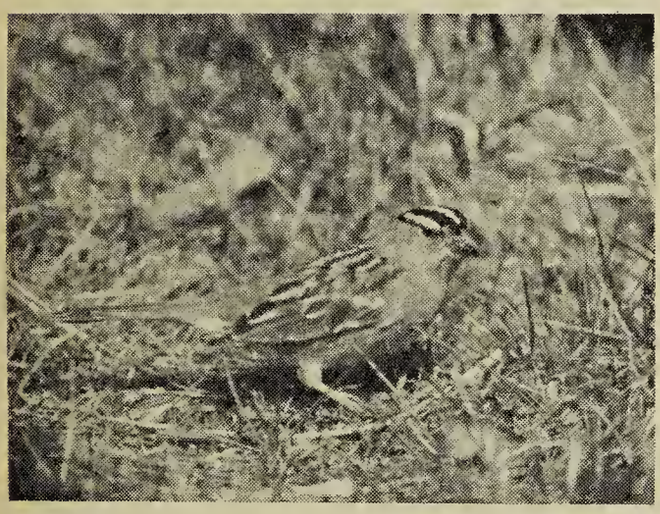

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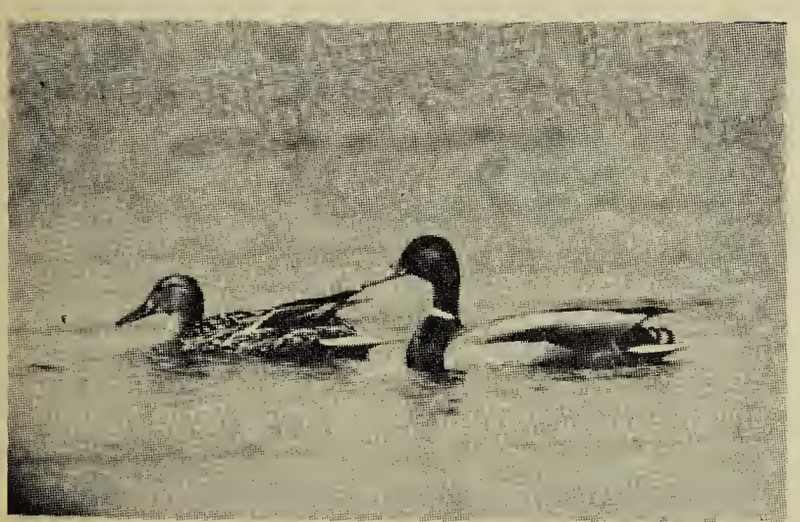

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Contest Rules: Any boy or girl, 16 or under, may enter the contest. Write your name, age and address at the top of the page then number from 1 to 12. After each number write the name of the bird in the corresponding picture. The names are those used according to the latest field check-list of Saskatchewan birds. This check-list can be obtained free of charge by writing to the Saskatchewan Museum of Natural History, Regina. To help you name the bird their scrambled names are given here. Closing date for entries is April 15. Prizes will be awarded according to age group. A special bird photograph will be given to everyone who enters.

Scrambled Names: poohgwni naerc; wocr; nowsy wlo; laalrmd; fderuf rgesuo; 'sbrwere kbaldridc; riamecan vteaoc; ltpniai; adanac esoog; mocrorant; tewih-crwoend sprrwao; naciream toco.

Antler Oddities in the Deer Family

by **E. Kuyt**, Hudson Bay, Sask.

Antler oddities in members of the deer family always give rise to a great deal of discussion. Some of these irregularities definitely appear to be related to body injuries. Calcium (carried in the blood and normally used to grow antlers) in case of a bone injury to the animal, now appears at the site of the injury and is deposited there for bone repairs. This leaves a shortage of calcium for antler growth and may result in an unfinished rack of antlers.

Antler **deformities** may be due to old age, to a low level of nutrition or to hereditary factors.

Failure of a buck to grow one or more antlers (I observed this several times in Barren Ground Caribou) and permanent retention of antlers in the velvet stage are also occasionally encountered. A male sex hormone, testostertone, is responsible for the hardening of the antlers in the summer and for the shedding of the velvet in the fall. Loss of this hormone to the animal's system (e.g. by castration) will often result in a pair of permanent velvet covered antlers in the male deer.

Generally speaking, antlered **female** deer are of two different types: those in which antlers permanently remain in the velvet and those in which the antlers are polished and well developed, quite similar to those of the male deer. In the first type the females are usually fertile and bear young. Their antlers are often small, asymmetric and apparently never shed. In the second type examples are exceedingly rare in the White-tailed Deer. There is no evidence of these does bearing young. The antlers are more symmetrical than those in the first group and they may be shed like the ones which adorn the bucks. These does are usually hermaphrodites (having both male and female reproductive organs). One special case of this group was found to have a tumor which apparently was capable of secreting male hormones.

Two to four antlered does are reported each year to the Pennsylvania Game Commission. In the past ten years an average of 33,000 antlered deer have been killed there each year; this would be about one antlered doe for each 8,000-16,000 bucks.

In Michigan, two to three antlered does are reported each year. The annual buck kill there is about 70,000; this makes a ratio of one antlered doe to each 23,000-35,000 bucks. As some of the antlered does undoubtedly are not reported, the average of one antlered doe to 5,000-8,000 bucks might be closer to the true average than the above figure.

Two antlered White-tailed Deer females have recently been shot in the Hudson Bay area. One was shot in October, during the emergency (early) season, the other in early November during the regular season.

I was able to gather the following information: **Doe A**, killed October 30, 1959, velvet antlers, both approximately 6" long and 3" in circumference and with two points on each antler, udder lactating, but no fawns nearby. **Doe B**, killed November 13, 1959, antlers in velvet, left antler 6" long, right antler about 6½" long, both antlers about 3¼"in circumference, one point on each antler, udder lactating, one fawn seen—possibly belonging to this doe. From this information it seems certain that both does belonged to the first type as both had velvet-covered antlers and both gave indication of being able to bear and nurse young.

Antlered does are so uncommon and our need for further knowledge about these animals is so great that hunters encountering them are urged to report the sighting or killing of any antlered doe.

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DOUTT, J. Kenneth, and DONALDSON, John C., 1959—An antlered doe with possible masculinizing tumor, Journal of Mammalies of Mule Deer. Journal of Mammalogy, 40: 96-108.

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Short-tailed Shrew North of the North Saskatchewan River

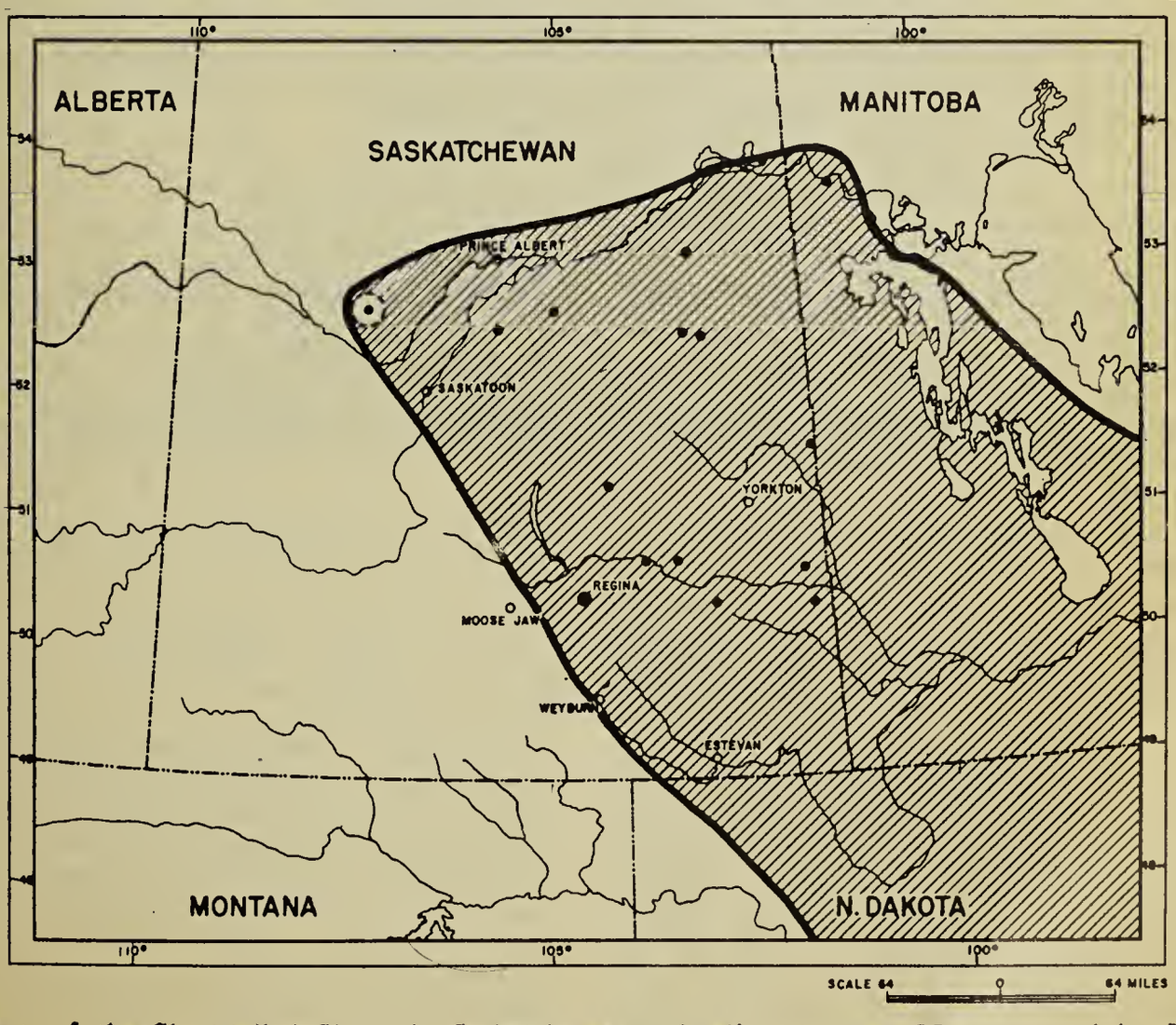
By **R. W. Nero**, Saskatchewan Museum of Natural History

S.M.N.H. Photo

Short-tailed Shrew. Reprinted from Beck's *Guide to Sask. Mammals* (1958).

A Short-tailed Shrew (*Blarina brevicauda*) trapped on December 16, 1959, by A. P. Pym at Keatley, Saskatchewan, extends the known range of this species nearly 90 miles west, to represent the westernmost record and the first reported record north of the entire Saskatchewan River system (see map). The Shrew was kindly submitted to the Museum by Mr. Pym and has been prepared as a study specimen (S.M.N.H. #7246); it is a female.

Four years ago the question was asked in the **Blue Jay**: "Did Short-tailed Shrews ever cross the Saskatchewan River? Or is this the northern and western barrier?" Whatever the story of their distribution, only the careful preservation and recording of specimens will yield the final picture. Accumulation of specimens for positive identification and as permanent records of the fauna of the province is one of the many roles of the museum. Since the museum staff is limited in its field activities, procurement of specimens over a wide area is difficult. Interested per-



Range of the Short-tailed Shrew in Saskatchewan and adjacent areas. Map prepared by Theo Kramer, Surveys Branch, Department of Natural Resources.

sons are invited to contribute to this program." (**Blue Jay,** 14 (2): 45-46). In December, 1957, a specimen of a Short-tailed Shrew from Wakaw evoked the statement: "Judging by this new record this species occupies a range in Saskatchewan covering at least all of the parkland belt from the Manitoba border to the Saskatchewan River. . . . It is questionable whether they appear north of the river since J. Dewey Soper did not find any in Prince Albert National Park. . . . However, only further collecting will provide the final answer." (**Blue Jay,** 15 (4):177).

Thanks to Mr. Pym we now have our answer; of course, this immediately raises the question again of the extent of their range. It is not much more than 115 miles west to the Alberta border and since the habitat appears to be continuously suitable, it seems possible that they may even occur in Alberta. This should give our members in that area something to search for, and we hope that others will be as lucky as Mr. Pym who caught this shrew in a mouse trap which he had set in his barn.

Data on some Short-tailed Shrew specimens not recorded in Beck's *Guide to Sask. Mammals* (1958. Saskatchewan Natural History Society, Spec. Pub. #1) which represent new locality records follows: Rocanville, about 1950—E. Symons; Rocanville, November 16, 1957—E. Dunsmore; Ethelton, January 14, 1959—Miss G. Belliveau; Madge Lake, September 3, 1959—R. W. Nero.

The map is based on these records as well as available Sask. specimens which have been previously reported (**Blue Jay,** 14:45; 15:121, 177). The range in adjacent areas is based on a map in a recent publication by E. Raymond Hall and Keith R. Kelson (1959. *Mammals of North America.* Vol. I, p. 53, Ronald Press Co., New York). A single recent record from The Pas, Manitoba, has been included. The dots on the map represent actual locality records but the outlined range merely indicates the probable occurrence. It is expected, of course, that this species will not be found everywhere within this range, but probably wherever there is suitable habitat. It is thus of equal importance to obtain specimens from additional localities within as well as outside of this area. It is essential that we determine, for example, the precise limits of their penetration into the prairie along the line between Keatley, Regina and North Dakota, where the habitat appears to be marginal.

Another Melanistic Snowshoe Rabbit

By **R. W. Nero,** Saskatchewan Museum of Natural History.

The relative scarcity of melanistic specimens of the Snowshoe Rabbit (or Varying Hare) (*Lepus americanus*) has been indicated by R. D. Bird (1955. Melanism in the Varying Hare, *Lepus americanus* Erxleben. *Canad. Field Nat.,* 69:11) and R. Velich (1956. Mammals from eastern Nebraska. *Journ. Mamm.* 37: 271-272). Bird lists five records from Canada: one from Quebec, three from Ontario and one from Marchwell, Sask. Another specimen was recently taken not far from the latter locality. On Dec. 13, 1955, Nick Bauer shot a black Snowshoe Rabbit at Waldron, Sask., 40 miles west of Marchwell. The specimen was submitted to the Museum by Jack Shaver, Wildlife Branch, Department of Natural Resources, and was mounted. This rabbit is overall very dark blackish-grey, and in some light is almost silvery. It is darkest on the ears (nearly black) and palest on the lower limbs except that the feet are darker. The pads are a dirty grey color and the nails are dark to light grey. There are occasional white hairs scattered throughout the pelage and there is a small cluster of white hairs in the center of the forehead. Data is not available on the eye color. According to J. Shaver reports have been received by the Wildlife Branch of at least two other black rabbits, both presumably Snowshoe Rabbits—one near Asquith (about 1947) the other near Theodore (about 1952).

Exotic Mammal Record

By **R. W. Nero,** Saskatchewan Museum of Natural History

A small rodent which was killed in a warehouse in Yorkton on July 5, 1959, and which was submitted to the Museum by Dr. Stuart Houston, has been identified as a Central American cricetid rodent—Sumichrast's Vesper Rat (*Nyctomys sumichrasti*). The identification was made by Dr. C. O. Handley, Jr., U.S. National Museum, Washington, D.C., through the courtesy of Dr. F. Banfield, National Museum of Canada. The specimen was presumably carried in with a shipment of fruit. It is a male and lacks the end of the tail which is supposed to be tufted. In general appearance it looks something like a long-tailed hamster, being reddish-brown above and white beneath. According to Hall and Kelson (The Mammals of North America. 1959: 577) "the vesper rat is brightly colored, arboreal, builds outside nests of twigs and fibres much like those of the red squirrel, and only occasionally descends to the ground."

Photo by A. H. Hruska

Don't touch it! Patricia and Gordon Hruska with White-tailed Deer fawn, May, 1959.

More About Painted Turtles

By **Arthur G. Kelly,** Spy Hill, Sask.

I live in the lower Qu'Appelle Valley about nine miles southwest of Spy Hill. I have seen some very large Painted Turtles around the mouth of Cut Arm Creek where it enters the Qu'Appelle River.

A few years ago I saw one of about eight inches in diameter that had just finished laying six eggs. The eggs were gelatine-like sacs or capsules about the size of pigeon eggs but not oval-shaped. Each end was the same. The turtle had climbed up a rather steep bank by the river that was exposed to the south. Then it dug a hole about six inches deep, laid its eggs and then packed the earth back quite tightly over them. I suppose the heat of the sun incubated the eggs and the steep bank helped the young turtles to reach the river.

A Blood Indian's Conception of Tribal Life in Dog Days

By **John C. Ewers**, U.S. National Museum, Washington, D.C.

Ed. Note: Mr. Ewers is Assistant Director of the Museum of History and Technology, United States National Museum, Smithsonian Institute, Washington, D.C. He was the first curator of the Museum of the Plains Indian at Browning, Montana, located on the Blackfeet Indian Reservation and while there did extensive ethnographic research on the Blackfeet. He has become known as an authority on them and has recently written a book *The Blackfeet Raiders of the Northwest Plains*. — T. F. Kehoe, S.M.N.H.

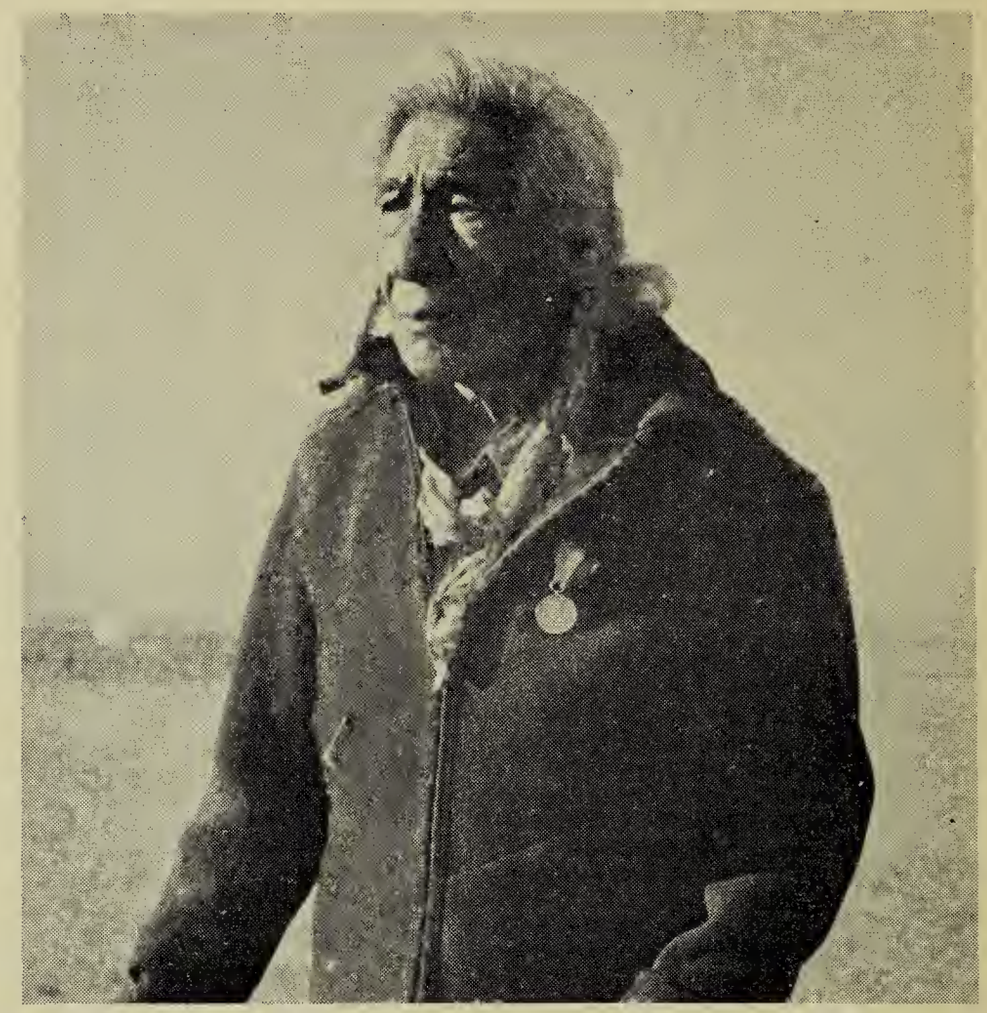


Photo by the author

Weasel Tail in 1947

On January 14, 1950, one of the strongest living links between the modern Blackfoot Indians and their traditional past was severed by the death of a little old man bearing the name of Weasel Tail on the Blackfeet Reservation in Montana. Weasel Tail's exact age, like that of other illiterate, fullblood Indians of his generation, was uncertain. The official census for the Blackfeet Reservation for the year 1901 listed Weasel Tail, then the father of a 20-year-old daughter, as 42 years of age. On the basis of this record he must have been some 91 years old at the time of his death, and in his middle eighties during the period 1941-1947 when he served as one of my principal informants.

When I last saw Weasel Tail in the summer of 1947 he was still physically active. His eyes were bright. His mind was clear and sharp. And he still possessed a delightful sense of humor which had made association with him a particular pleasure. Weasel Tail was born and raised among the Blood Indians in Canada, but he had spent most of his adult life among the Piegans south of the border. In his youth and young manhood he had hunted buffalo and had been on a goodly number of horse-stealing raids against neighbouring tribes. His memory of the details of Blackfoot life in those days was remarkable. He was also well versed in the rich mythology of his tribe. But unlike most other aged fullbloods Weasel Tail tried to distinguish between mythological explanations of Blackfoot life in the dim and dateless past and the testimony of older Indians whose descriptions were of a more personal nature.

As a young man Weasel Tail had repeatedly questioned some of the oldest men and women of his tribe about the life of the Blackfeet in

earlier times. Among his informants was a very elderly woman (whom Weasel Tail firmly believed was over 100 years old), Two Strikes Woman, whom he had befriended and who had told him stories of her great-grandfather's time handed down to her by her father. Another elderly Blood Indian, Victory All Over Woman, recounted to him stories which she had heard during her girlhood from the lips of her aged grandparents who had claimed to remember tribal life in the days before the Bloods obtained horses. From his memories of such conversations as these Weasel Tail described to me some aspects of Blood Indian life in dog days, probably 225 or more years ago.

Certainly I do not contend that these third or fourth-hand reminiscences of an elderly Indian born in 1859 present an unadulterated word picture of Blackfoot life in dog days. But in the total absence of any contemporary observations of Blackfoot customs by literate people in those early times, I believe Weasel Tail's testimony is worth preserving and worth recording for the consideration of students of history and archaeology who are seeking to trace the course of human occupation of the Northwestern Great Plains. Weasel Tail's account, which follows, may be of particular interest to students of Saskatchewan history and pre-history because it is most probable that the Blackfoot tribes dwelt within the present boundaries of this province before they acquired firearms and horses and moved westward toward the Rocky Mountains and southward into present Montana.

For the convenience of the reader I have organized Weasel Tail's testimony as follows:

Camp Movements in Dog Days

When the Indians moved camp all the able-bodied men, women and children old enough to keep up with the others, walked. Sometimes old people, too feeble to walk, were transported on a litter consisting of two cross poles tied between the frames of two travois each of which was pulled by a strong dog.

Lodges were small. Their covers were made of but five or six buffalo skins. These covers were made in two parts, one for the right and one for the left side of the tipi. In setting up the lodge the two sections were laced together along the vertical line of the center of the back of the tipi, then pinned together above the doorway in front. When a lodge was taken down one half of the cover was folded and placed upon the back of a dog. The other half was packed on the back of a second dog. Thus two dogs were needed to transport the skin covering of a tipi. The relatively short poles needed to support a lodge of this size were grouped in small bundles and tied to the cross frames of dog travois so that the ends of the poles dragged on the ground behind.

Cooking pots and soft skin bags containing other household furnishings and utensils were placed upon the oval cross-frames of dog travois for transportation.

Surrounding the Buffalo

After swift-running men located a herd of buffalo, the chief told all the women to get their dog travois. Men and women went out together, approaching the herd from down wind so that the animals would not get their scent and run off. The women were told to place their travois upright in the earth, small (front) ends up. The travois were spaced so that they could be tied together, forming a semi-circular fence. Women and dogs hid behind them while two fast-running men circled the herd, approached them from up wind and drove them toward the travois fence. Other men took up their positions along the sides of the route and closed in as the buffalo neared the travois enclosure. Barking dogs and shouting women kept the buffalo back. The men rushed in and killed the buffalo with arrows and lances.

After the buffalo were killed the chief went into the center of the enclosure, counted the dead animals, and divided the meat equally among the participating families. He also distributed the hides to the families for making lodge covers. The women hauled the meat to camp on their dog travois. This was called "surround of the buffalo."

Women fleshed the hides with a buffalo shank bone one end of which

Courtesy Univ. of Pennsylvania Museum
Weasel Tail in 1891

was hewn to a sharp edge. They scraped them with a sharp flint bound to an antler handle. They softened the hides by pounding them with rocks.

A Trap for Deer

Men dug a deep hole in the ground about 15 to 20 feet in diameter. They placed supporting posts in the hole and covered it with slim willows, over which they placed grass so that the hole was completely hidden. The men then drove the deer toward the pit. When the deer stepped on the willow covering it gave way and the animals fell into the pit. Then the men killed them with clubs. This was called a "deer fall."

(Weasel Tail said that old Two Strikes Woman showed him a pit of this type, located about 5 miles south of Macleod, Alberta. At the time it was overgrown with vegetation.)

A Trap for Wolves and Coyotes

Men dug a smaller hole to trap wolves and foxes. They covered it with sticks and grass, and placed manure, entrails and bones of buffalo on top of this covering. At intervals around the exterior of the pit they placed bent willows in the ground to which were attached hares. Then they built a fire nearby in which they melted some fat. Animals could smell the burning fat a long way off, and were attracted to the location. When they went for the bait atop the pit they either were caught in the snares or fell into the lightly-covered hole.

Pottery Making

Women made pottery from crushed rock mixed with sand and water. They dug a little pit in the ground and made a fire in it to harden the earth walls. Then they lined the bottom and sides of the pit with the pottery mixture. While this was still fresh and soft they pushed small stones into the clay at two points opposite each other and near the top of the pit sides. Then they built a fire inside to harden the pot. When it was sufficiently hardened the fire was extinguished and the pot lifted out of the hole by the two stone handles.

(Note: On September 2, 1947, Double Victory Calf Robe, an aged woman on the Blood Reserve in Alberta, told me a variant tradition of Blackfoot pottery making. She said that quantities of sandstone and selenite were ground to powder and mixed with water into a dough. A hole was dug in the ground and the dough was spread over the inner surface of the hole. Boiling water was poured into the hole and allowed to stand for a period. Then the pot was removed, smoothed on the outside, and later used for boiling meat.)

Marriage

If a young man fell in love with a girl and wanted to make her his wife he hitched a good travois dog to a travois and took it to the girl's father, saying to him, "I will give you these for your daughter." A father of a girl might offer the same kind of gift to a young man whom he wanted for a son-in-law.

Warfare with the Snakes

Long ago the Snakes (Shoshonis) and Blackfeet were friendly. But one time a group of Snake and Blackfoot boys were playing a kind of

football game. One of the Snake boys was hurt. His father became angry and clubbed to death the Blackfoot boy whom he accused of injuring his son. This started the fighting between these tribes.

Scabby Robe was the first Blackfoot Indian to take a Snake scalp. The opposing forces of Snakes and Blackfeet confronted each other on opposite sides of the Bow River near present Gleichen, Alberta. A Snake Indian challenged a member of the Blackfoot party to meet him in single combat. Scabby Robe answered his challenge and the two met in the middle of the river. The Snake threw his "big arrow" (lance) at Scabby Robe. It missed, and Scabby Robe picked it up and killed the Snake with his own weapon. Scabby Robe brought the body of the Snake ashore and took the scalp as a war trophy. From that time on there was continuous warfare between the Snakes and Blackfeet.

In those days, however, any man who didn't wish to fight would sit down in the midst of a battle, throw up his hands, and the enemy would not bother him. But one time a Blackfoot Indian did this and the Snakes killed him. Thereafter the Blackfeet had no mercy for their enemies.

The Blackfoot tribes didn't use shields in their warfare before they obtained guns. Rather they clothed themselves in long shirts of three thicknesses of buckskin. These shirts reached to below the wearer's knees. They were good protection against enemy arrows.

Acquisition of the First Firearms

The Blackfeet began to acquire guns before they got horses. Before they had any guns the bow and arrow was their principal weapon. They were then friendly with the Crees. One time a party of Blackfeet was in the woods north of the Saskatchewan. They heard a frightening noise and began to run away. Some Crees, who had made the noise by shooting a gun, motioned to the Blackfeet and told them to come to them. The Crees then showed the Blackfeet how to load a gun from the muzzle and fire it by pulling the trigger.

Later one of the Cree young men married a Blackfoot girl and gave one of the new weapons to his father-in-law. Soon thereafter another Cree married a Blackfeet and gave the girl's father a gun. That is how the Blackfeet obtained their first guns.

Still later the Blackfeet obtained two guns from a trader. When a war party set out against the Crows and Shoshonis to the south, they took guns along. And when the enemy heard the noise of these guns they were so frightened that they fled southward from their location near present Calgary, leaving their tipis, their horses, and all of their camp equipment behind them. The Blackfeet drove the Crows, Snakes, Flatheads and Nez Percés from the Bow River southward to the Sweetgrass Hills and beyond. The Crees helped the Blackfeet to do this.

Acquisition of the First Horses

Shaved Head led a war party southward to about the location of the present Blackfeet Reservation in Montana. There they discovered a camp of Indians from west of the Rockies who owned a lot of horses. The Blackfeet stole some of these animals. When some of the warriors tried to mount the horses the latter began to walk and the frightened would-be riders quickly jumped off. They led the horses homeward. When the people heard that Shaved Head had brought back a pack of "big dogs," they gathered around the strange animals and looked at them in wonder. They put robes on the horses, but when the animals began to jump they ran. After a time a woman said, "Let's put a travois on one of them just like we do on our small dogs." They made a larger travois and attached it to one of the gentler horses. It didn't kick or jump. They led the horse around with the travois attached. Finally a woman mounted the horse and rode it.

The Blackfeet called these first horses "big dogs." Later, because the animals were about the size of an elk, they called them "elk dogs." And that, of course, is still the name for horses in the Blackfoot language.

Courtesy Hugh Dempsey
Blood Indian Woman with Dog Travois, 1924

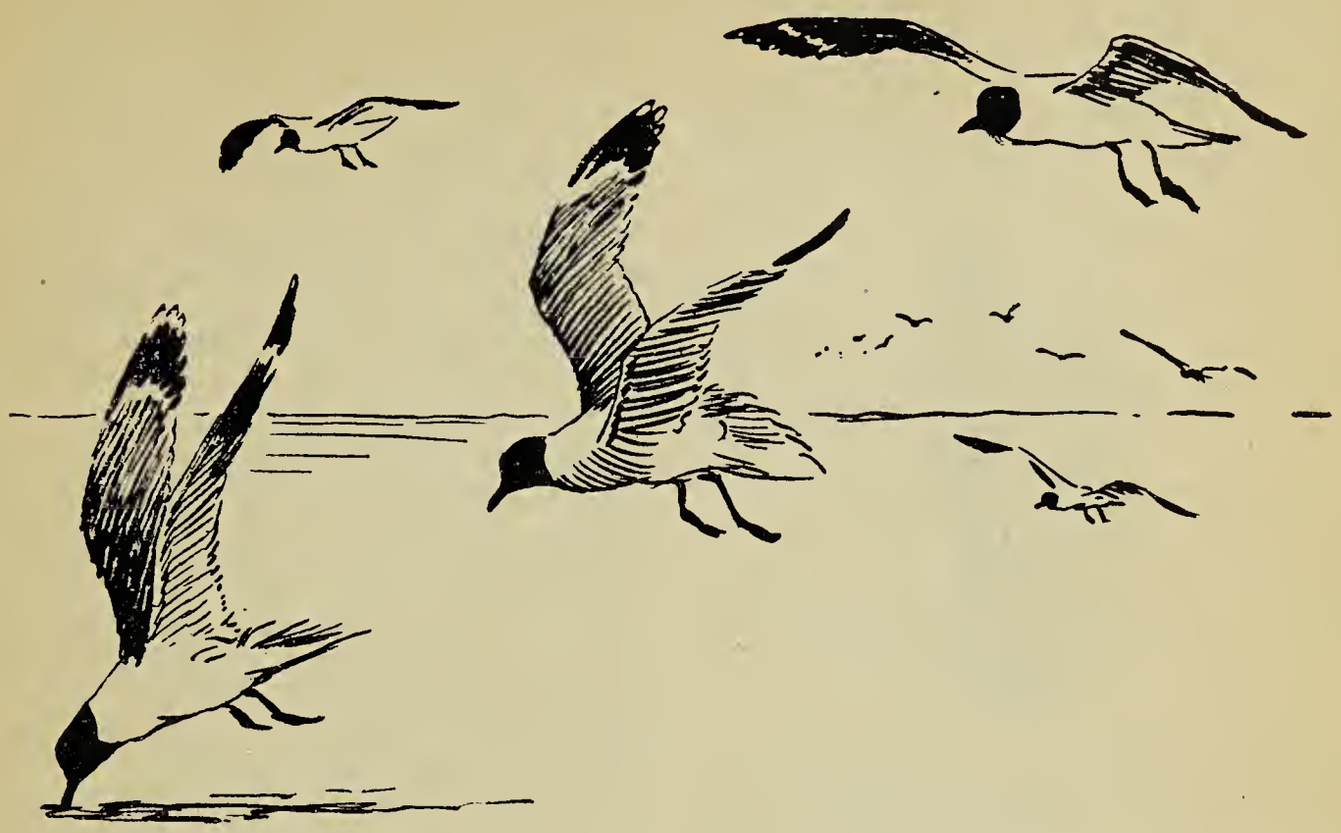
Turtle Stones

By **A. J. Hruska,** Gerald

Photo by Cyril DeGryse
Turtle Stone

Scattered over our province are interesting rocks which people sometimes call "Turtle Stones." The marking on these rocks do sometimes, as in the one illustrated, resemble the markings of a turtle carapace, but these rocks are not parts of a fossil turtle. The Turtle Stone has been formed by the cracking of some early deposit. The polygonal cracks are later filled in by another material, perhaps a calcite. These two rock materials are later exposed and in this case the rock has been waterworn, for its edges are rounded and smooth.

The Blue Jay Bookshelf



Sketch by C. Tellenius

SKETCH PAD OUT-OF-DOORS. By Clarence Tillenius. Published by Country Guide, Winnipeg, 1956. $1.00.

Mr. Tillenius, a Manitoba artist, showed some of his pictures at the Art Exhibit during the A.O.U. convention, and many of us met this charming man at that time. He has a column in *The Country Guide* which he illustrates with interesting and authentic drawings of birds and animals. His illustrations have adorned many magazine stories about natural history subjects.

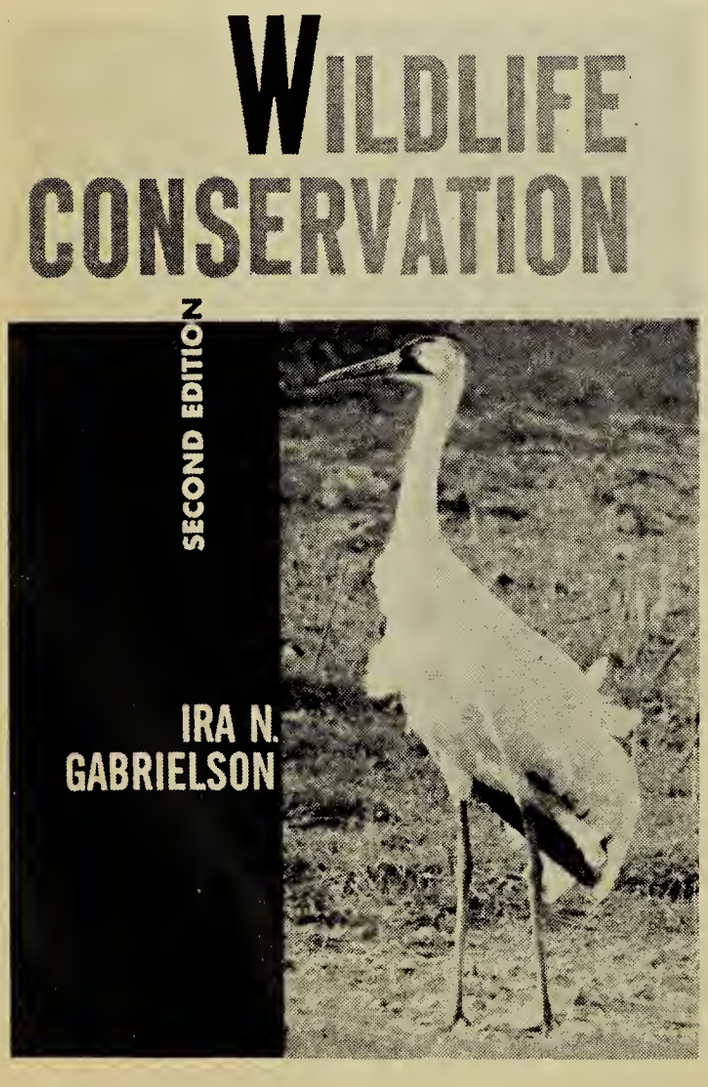
This little book, called *Sketch Pad*, would be helpful I would think to artists, amateur and professional. Although Mr. Tillenius maintains that it is not a textbook on drawing, there are many practical suggestions about how we can gain experience in drawing from nature; for example, he suggests a warm afternoon sketching hens as a beneficial study in the way feathers grow on birds, i.e., the "feather tracts." He gives practical hints on how to capture the movements of birds and animals. Other tips include the suggestion that a brush dipped in India ink is a suitable tool with which to draw the crow, "the cleverest of birds." All the ideas and directions are simple, easily understood and practical; they are from one who learned to draw and observe while he lived on a farm, and they are given to others lucky enough to be similarly situated.

Quite aside from its value to the artist, the homey style of the book and authentic information included will recommend it to anyone who "notices such things"; such a one will find himself noticing things in a dif-

ferent and more appreciative way.

The *Sketch Pad* is intended primarily for the artist and will become, as Mr. Tillenius says, "a friend who will accompany you, will discuss with you some of your own experiences and now and then offer a hint that may make easier your attempts to render by art the things that to you seem beautiful."—M. L.

WILDLIFE CONSERVATION. By Ira N. Gabrielson. 1959. The Macmillan Co., New York, N.Y. 224 pp., 32 plates, 23 line drawings. $5.50.



This book offers a factual and practical review of the field of conservation with special emphasis on wildlife. For those who need a restatement of fundamentals: "Three concepts are considered to form the basis of the conservation movement: (1) that soil, water, forest, and wildlife conservation are only parts of one inseparable program; (2) that wildlife must have environment suited to its needs if it is to survive; and (3) that any use that is made of any living resource must be limited to not more than the annual increase if the essential seed stock is to be continually available."

Primary problems and truths are briefly stated in 17 chapters as follows: Conservation of Renewable Resources, Soil and Wildlife, Water Conservation, Life of the Waters, Forest Conservation, Relationship Between Forestry and Wildlife, Wildlife on Agricultural Lands, Grassland Conservation and its Relation to Wildlife, Some Basic Facts in Wildlife Conservation, Resident Game, Migratory Birds, Fur Animals, Nongame Birds and Mammals, Rare and Vanishing Species, Predator Relationships, Wildlife Refuges and their Place in Conservation, Surmounting the Obstacles to Conservation.

Dr. Gabrielson is well qualified to present an up-to-date summary of the conservation problems facing lovers of nature, management groups and industrialists, having been director of the U.S. Fish and Wildlife Service from 1940 to 1946, when he retired to become President of the Wildlife Management Institute. He is co-author of the recent and important *Birds of Alaska*.

His most important message to us: "The greatest need is for an alert, intelligent conservation group in every community. Each group should challenge every project that will radically alter vegetative and water conditions in its section. Much needless damage may be averted if, in drainage projects, the construction of huge dams, the establishment of industries that increase pollution, the erection of new levees pushed closer to the river centers, or in great land-selling programs, those who promote the 'developments' are forced to give consideration to all the probable results before the work is undertaken, and to render an accounting before

the bar of public opinion. Vigilance in these respects will always be necessary. There will ever be grasping hands eager to despoil our basic resources, and there must be strong and resolute conservation forces to oppose and control the spoilers."—R. W. NERO, S.M.N.H.

THOUSAND ACRE MARSH. By Dudley Cammett Lunt, 1959. The Macmillan Co., New York, N.Y. 174 pp., illus. by sketches of Mel Hunter. $3.75.

There are dozens of books following the country year from Spring into Summer, through Fall to Winter and into Spring again, but *Thousand Acre Marsh* is none the less enjoyable for that.

The incidents in *Thousand Acre Marsh*, sub-titled "A Span of Remembrance," have been garnered from a lifetime spent enjoying the outdoors, and will delight anyone who like Mr. Lunt has savoured the sights and sounds and smells of the countryside, though he has never seen a tidewater marsh or been within a thousand miles of Maine or Delaware. Mr. Lunt observes with a keen eye and ear, and delights in what he sees and hears, and such is his way with words that the reader himself becomes the observer, and knows the same thrill of discovery as the writer.

Mr. Lunt, in a boyhood spent in Maine and a manhood spent in Delaware, has watched birds in flight, listened to their song; he has wondered at the changing magic of the sky in storm and sunshine, has canoed over white waters, and collected newly-opening buds in the spring. He has hunted and fished, and tasted the whole flavour of the outdoors in every minute of it.

Thousand Acre Marsh is a book to be read lazily—for on every page there is something to call up the reader's own remembrances, to be enjoyed again in Mr. Lunt's good company.—S. R. STEWART, Moose Jaw.

BACK COPIES OF THE BLUE JAY

There are a limited number of back copies of the **Blue Jay** which can be obtained while they last for 25 cents each. Write to G. F. Ledingham, 2335 Athol Street, Regina.

LETTERS

RECOLLECTIONS OF TRIP TO THE A.O.U. MEETING IN REGINA

Being a resident of California, I did not anticipate that I would ever have any notes on Saskatchewan birds, although I have read much about the natural history of that province in the **Blue Jay** . . . However, my wife and I drove to the A.O.U. meeting last August and made quite a number of first-hand observations of the birds of this "far-away" province.

We saw our first Pigeon Hawk near the lower end of Last Mountain Lake, as well as species with which we are familiar in California. We were happy to see the large flocks of Sandhill Cranes "acting up" as they do in their wintering area in the central valley of our state. We enjoyed the magpies, waxwings, etc., of the Qu'Appelle Valley. We were pleased to note the fearless attitude of wildfowl, even those on the ponds and lakes close to the Trans-Canada Highway.

We noted that the fast highway travel along this fine stretch of coast-to-coast highway takes its toll of birds. At one spot east of Swift Current a flock of redwings lost seven of its numbers at one swish of a fast-moving car. Further on we found that a Franklin's Gull and two meadowlarks had met a like fate. At Tompkins (August 30) we picked up, dead, along the highway a beautiful female Great Horned Owl, and it is now a scientific study skin in our collection here. The stomach held the flesh and bones of a medium-sized mammal, grasshopper parts, etc.—evidence of the beneficial status of this species.

Highway-killed specimens are getting to be the major source of scientific skins for our museum here. We

brought home a Short-tailed Weasel, a Common Nighthawk, and a female Redwinged Blackbird, picked up en route on our trip.

The A.O.U. sessions, exhibits, falconry demonstrations, pictures, and fellowship were well worth travelling the 3500 miles to experience, and now—knowing your country better—we shall enjoy our **Blue Jays** even more. — **EMERSON A. STONER,** Western Bird-banding Association, Benicia, California.

LATE RECORDS OF SUMMER BIRDS

I would like to report the sighting of a Meadowlark on Jan. 2. My father was getting bales of straw from a stack when a bird flew out. It flew towards our barn and landed on a manure pile. I was nearby and couldn't believe my eyes when I saw it was a Meadowlark. Several weeks earlier I found one dead in a haystack. Many birds were caught in the severe storm that swept the prairies in October, and I am certain many birds perished in southern Manitoba.—**Ernest J. White,** Dumea Manitoba.

We had a Song Sparrow appear in the yard on Nov. 8. It was the first we had seen since Sept. 14, and it must have weathered the early October 8-inch snowfall elsewhere. It seemed in good condition, but it did not fly too well. It fed first in the chicken yard and then when the snow got deep it found the feeding tray on the kitchen window. As the weather turned colder it seemed to be active still, but suffering from the cold. Finally, on Jan. 5 after a night of -30° I found it dead under the feeding tray.—**Joyce Gunn,** Spirit Lake, Sask.

BADGER'S COLD STORAGE PLANT

I noticed a reference to an article in the **Blue Jay** entitled "Badger's Cold Storage Plant," and wondered whether I had found one last November while hunting. This was a deer covered up with earth by a badger. I went back in December, and it looked as though a bulldozer had been at work. All the earth was turned over, and of the deer—a fair-sized doe—nothing was left but the hide and bones. Another hunter found a similar case about two miles from mine.—**F. H. Chase,** Plunkett, Sask.

NOTES FROM A NEW MEMBER

A new member from Hardisty, Alberta, **Andrew Cheram,** writes about the wildlife on their farm along the Battle River. Geese and Sandhill Cranes come through in spring migration, Prairie Falcons have been seen in the fall (and Cheram wonders whether they are wandering or breeding birds), Great Horned Owls and three to four kinds of hawks nest in the area. Ring-necked Pheasants are back up to their former numbers after the 1948 flood and the hard winter of 1952; Ruffed Grouse, Sharp-tailed Grouse and Mourning Doves were quite numerous in 1959. The Sharp-tails use a small hill on the farm for their mating dance.

Of special interest is Cheram's note on the eagles: "We have no Golden Eagles around here but there has been a family of Bald Eagles nesting a few miles from home every year now for some years. The male bird is really large; I would say its wing spread is at least 6 to 7 feet, and when it sits on a rock or tree it is about 4 feet high. We seldom see them in spring or summer, but in fall and winter they fly over our farm once or twice a week. As far as I know they stay here the year around."

S.N.H.S. Summer Meeting

Greenwater Lake Provincial Park, June 18-19.

Programme— Members meet at Park Headquarters, Friday evening, June 17,; registration, Sat. a.m.; field trips, Sat. a.m. and p.m., Sun. a.m.

Accommodation — 18 non-modern L.H.K. cabins (2 bedrooms each) $5.00-$6.00; 2 duplex units (1 bedroom and studio lounge) $4.00; camping space with kitchen. Hotels at Chelan, Rose Valley and Kelvington.

Reservations—For accommodation in the park, **write after April 1** to Mr. Walker, Manager, Greenwater Lake Provincial Park, Kelvington.

If you have programme suggestions, write to **W. A. Brownlee, Rose Valley, Sask.**

THE SASKATCHEWAN NATURAL HISTORY SOCIETY

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NOTICE TO MEMBERS

In order to meet the printing costs of the **Blue Jay** the Annual Meeting, 1959, decided that the regular membership must be raised to $2.00, with a $1.00 membership being retained for junior members and for schools. It is important that we do not lose members because of this increase in fees. In the hopes that all previous members will subscribe again, and that others will join them, we have added four pages to this issue of the **Blue Jay.** Can we afford an enlarged **Blue Jay?**

MEMBERSHIPS

All persons interested in any aspect of nature are invited to join the Saskatchewan Natural History Society. Membership dues per calendar year are: Regular, $2.00; Junior (including schools), $1.00. The **Blue Jay** is sent without charge to all members not in arrears for dues. Send your membership to the treasurer, Constance Pratt, 3136 Rae Street, Regina, Sask.

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Mule Deer, near Banff, March, 1959 Photo by Kathleen Hodges

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